

High School Completion

Definition

This metric represents an estimate of the percentage of a state's non-institutional population aged 25 and older that has completed high school. The estimate was based on the March 2000 Supplement to the 2000 Current Population Survey (CPS). The CPS is a monthly interview-based survey conducted by the U.S. Bureau of the Census, and the supplement contains additional questions asked annually in March about money income received in the previous calendar year, educational attainment, household and family characteristics, marital status, and geographical mobility.

Relevance

High school completion, either through graduation or by successfully passing the general equivalency examination, is the first major educational milestone that is not mandated by law. Attaining this milestone represents a choice made by the student that affects both his own destiny and that of the wider community. The amount of education an individual has directly correlates with his earnings potential. A better-educated work force impacts the state's ability to grow established businesses and to attract new ones.

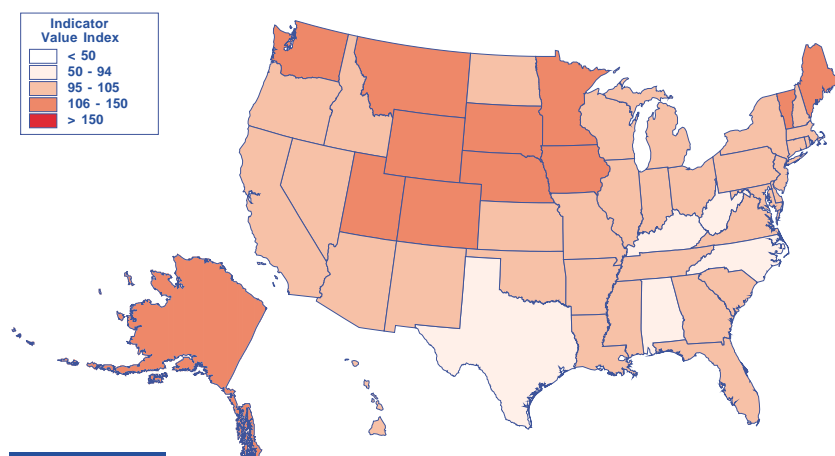
High school completion rates represent the first level of outcomes through which state educational systems can be compared. Graduation rates depend not only on teachers, classrooms, and buildings, but also on the emphasis that parents and the community place on education and on their willingness to provide alternative routes to meet the goal of high school completion.

Nationwide, 84.1% of all adults ages 25 and over have completed high school, but state high school completion rates vary from a low of 77.1% in West Virginia to a high of 91.8% in South Dakota and Washington. The median high school completion rate for the 50 states was 86.1%. The high school completion level of young adults (ages 25 to 29) was 88%, while 90% of the employed civilian labor force ages 25 and over had a high school diploma.

Data Considerations and Limitations

The data used for this metric represent estimates based on a sample survey and are subject to sample variability. The survey uses an estimation procedure that adjusts weighted sample results to agree with independent estimates of the civilian non-institutional population of the U.S. by age, sex, race, Hispanic/non-Hispanic origin, and state of residence.

These data are identical to the data for this metric contained in the Second Edition. The Census Bureau is in the process of reweighting the 2001 educational attainment data based on the 2000 Census. They expect release of the 2001 data in the Fall of 2002.



Source of Data

High School Completion:

U.S. Census Bureau. (2000, December 19). *Educational Attainment of the Population 25 Years and Over, By State, Including Confidence Intervals of Estimates: March 2000*. <<http://www.census.gov/population/socdemo/education/p20-536/tab13.txt>> (2001, March 22).

Percent of the Population that has Completed High School: 2000

STATE	INDICATOR VALUE	Rank	Indicator Value Index *
Alabama	77.5%	49	92
Alaska	90.4%	5	107
Arizona	85.1%	31	101
Arkansas	81.7%	40	97
California	81.2%	42	97
Colorado	89.7%	9	107
Connecticut	88.2%	13	105
Delaware	86.1%	25	102
Florida	84.0%	34	100
Georgia	82.6%	37	98
Hawaii	87.4%	17	104
Idaho	86.2%	23	102
Illinois	85.5%	29	102
Indiana	84.6%	33	101
Iowa	89.7%	9	107
Kansas	88.1%	14	105
Kentucky	78.7%	48	94
Louisiana	80.8%	43	96
Maine	89.3%	12	106
Maryland	85.7%	27	102
Massachusetts	85.1%	31	101
Michigan	86.2%	23	102
Minnesota	90.8%	3	108
Mississippi	80.3%	44	95
Missouri	86.6%	21	103
Montana	89.6%	11	107
Nebraska	90.4%	5	107
Nevada	82.8%	36	98
New Hampshire	88.1%	14	105
New Jersey	87.3%	18	104
New Mexico	82.2%	39	98
New York	82.5%	38	98
North Carolina	79.2%	46	94
North Dakota	85.5%	29	102
Ohio	87.0%	19	103
Oklahoma	86.1%	25	102
Oregon	88.1%	14	105
Pennsylvania	85.7%	27	102
Rhode Island	81.3%	41	97
South Carolina	83.0%	35	99
South Dakota	91.8%	1	109
Tennessee	79.9%	45	95
Texas	79.2%	46	94
Utah	90.7%	4	108
Vermont	90.0%	7	107
Virginia	86.6%	21	103
Washington	91.8%	1	109
West Virginia	77.1%	50	92
Wisconsin	86.7%	20	103
Wyoming	90.0%	7	107
50 States	84.1%	—	100
Dist of Columbia	83.2%	—	99
Puerto Rico	N/A	—	—

* 100 equals 50-state indicator value



Associate's Degrees Granted

Definition

The number of associate's degrees conferred by Title IV eligible, degree-granting institutions in the 1999-2000 academic year was segmented by state and normalized to the population of 18-24 year olds in each state. The 18-24 year old segment of the population was selected because it is the age division that corresponds most closely to the population of individuals who were the most likely candidates for an associate's degree. In this way, the number of associate's degrees granted by individual states can be compared. In addition to reporting the number of degrees awarded for size of the potential student population, this method of normalization also removed any differences in the age distribution of the population in different states. This was particularly important for those states having a high percentage of retirees.

Relevance

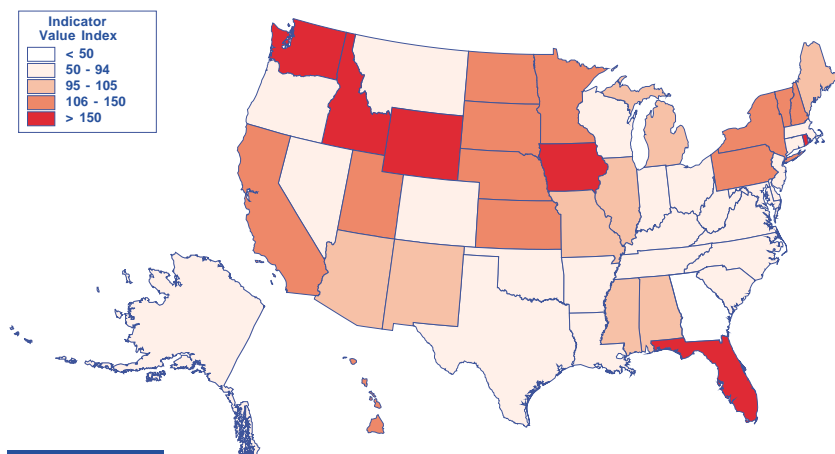
Obtaining an associate's degree is a next step in the educational ladder beyond the high school diploma. Some students who are awarded an associate's degree will continue with their education to the bachelor's level, but many will not. Since approximately twice as many bachelor's degrees are awarded each year as are associate's degrees, many bachelor's degree holders do not receive an associate's degree.

During the 1999-2000 academic year, 24% of the almost 2.4 million degrees awarded were associate's degrees. The total number of associate's degrees granted in the 50 states was 564,526. That was equivalent to 2.09% of the 18-24 year old population. the median equivalent percentage of associate's degrees granted in the 50 states was 1.99% of the 18-24 year old population.

Data Considerations and Limitations

Data on the number of associate's degrees awarded were provided by state coordinators for the Integrated Postsecondary Education Data System (IPEDS) or by officials at individual institutions. The IPEDS Fall 2000 data collection was the first full-scale web-based IPEDS data collection. Each institution appointed a keyholder, who was the person responsible for ensuring that the survey data submitted by the institution were correct. The IPEDS database indicated that there were 1,791 2-year degree granting institutions. Of these, 1,761 responded (98.3%) and 1,691 of the responses provided completions data (96.0%). For institutions that failed to provide completions data and met a series of predetermined conditions, completions data were imputed using methodologies such as Carry Forward, Nearest Neighbor, or Group Median. For associate's degrees, a total of 9,952 degrees was imputed, or 1.7% of the total number of associate's degrees.

The number of degrees awarded represents only the overall number of degrees awarded by institutions within a state. Degree recipients may include residents, out-of-state students, and foreign students. Data related to the degrees awarded by foreign institutions are not available by U.S. state of residence.



Source of Data

Associate's Degrees Granted:

U.S. Department of Education, National Center for Education Statistics, [E.D. Tabs]. *Postsecondary Institutions in the United States: Fall 2000 and Degrees and Other Awards Conferred: 1999-2000*, NCES 2002-156, by Laura G. Knapp, et.al.. Project Officer: Susan G. Broyles. Washington, DC: 2001.

Population, 18-24 Years Old:

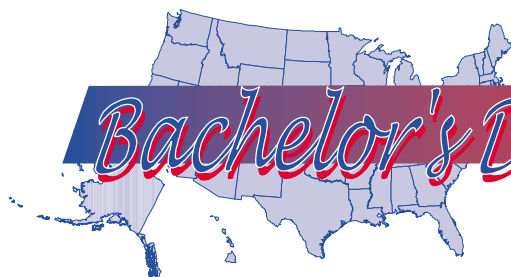
U.S. Census Bureau. *American Factfinder - Census 2000 Summary File 2 - Matrices PCT3 SEX BY AGE*. <http://factfinder.census.gov/servlet/DTTable?_ts=41948747704> (2002, June 12).

Total Associate's Degrees Granted as a Percent of the 18-24 Year Old Population: 1999-2000

STATE	Associate's Degrees Granted	2000 Population 18-24 Years of Age	INDICATOR VALUE *	Rank	Indicator Value Index **
Alabama	8,765	439,612	1.99%	25	96
Alaska	895	57,292	1.56%	43	75
Arizona	10,658	514,101	2.07%	23	99
Arkansas	3,885	261,738	1.48%	45	71
California	78,360	3,366,030	2.33%	16	112
Colorado	7,720	430,111	1.79%	33	86
Connecticut	4,298	271,585	1.58%	42	76
Delaware	1,119	75,328	1.49%	44	71
Florida	44,548	1,330,602	3.35%	4	161
Georgia	7,803	837,732	0.93%	50	45
Hawaii	3,266	114,893	2.84%	9	136
Idaho	5,040	138,829	3.63%	2	174
Illinois	26,561	1,210,898	2.19%	19	105
Indiana	11,174	614,721	1.82%	31	87
Iowa	9,367	298,008	3.14%	6	151
Kansas	7,288	275,592	2.64%	12	127
Kentucky	6,492	401,858	1.62%	41	77
Louisiana	5,573	473,801	1.18%	48	56
Maine	2,208	103,903	2.13%	22	102
Maryland	7,438	450,922	1.65%	40	79
Massachusetts	10,680	579,328	1.84%	28	88
Michigan	18,851	932,137	2.02%	24	97
Minnesota	11,030	470,434	2.34%	15	112
Mississippi	6,764	310,974	2.18%	20	104
Missouri	10,603	535,978	1.98%	26	95
Montana	1,562	85,757	1.82%	30	87
Nebraska	3,893	174,425	2.23%	17	107
Nevada	1,988	179,708	1.11%	49	53
New Hampshire	3,038	103,369	2.94%	7	141
New Jersey	12,100	676,628	1.79%	35	86
New Mexico	3,783	177,576	2.13%	21	102
New York	50,264	1,765,453	2.85%	8	137
North Carolina	13,505	806,821	1.67%	38	80
North Dakota	2,051	73,118	2.81%	11	135
Ohio	19,393	1,056,544	1.84%	29	88
Oklahoma	6,408	357,085	1.79%	34	86
Oregon	6,450	327,884	1.97%	27	94
Pennsylvania	24,350	1,094,449	2.22%	18	107
Rhode Island	3,550	106,607	3.33%	5	160
South Carolina	6,796	407,851	1.67%	39	80
South Dakota	1,833	77,634	2.36%	14	113
Tennessee	7,708	548,856	1.40%	46	67
Texas	30,816	2,198,881	1.40%	47	67
Utah	7,867	317,431	2.48%	13	119
Vermont	1,594	56,586	2.82%	10	135
Virginia	11,499	679,398	1.69%	37	81
Washington	19,268	559,361	3.44%	3	165
West Virginia	3,049	172,431	1.77%	36	85
Wisconsin	9,381	520,629	1.80%	32	86
Wyoming	1,994	49,928	3.99%	1	192
50 States	564,526	27,070,817	2.09%	—	100
Dist of Columbia	407	72,637	0.56%	—	27
Puerto Rico	N/A	—	—	—	—

* (Associate's Degrees Granted / 2000 Population 18-24 Years) x 100%

** 100 equals 50-state indicator value



Bachelor's Degrees Granted

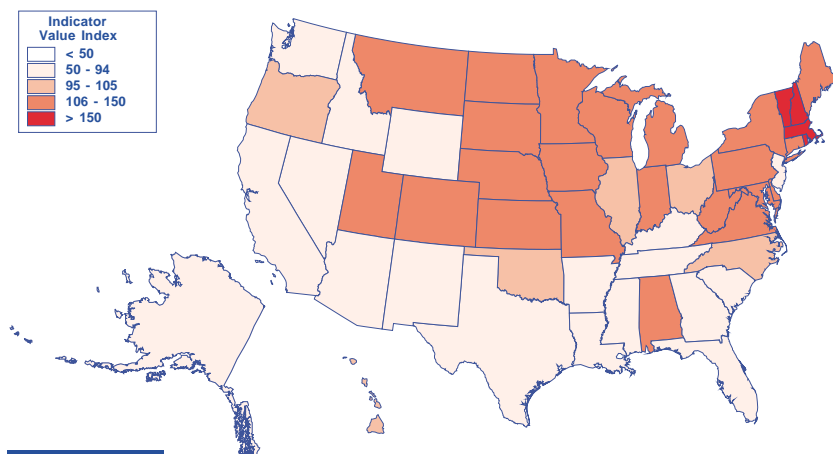
Definition

The number of bachelor's degrees conferred by Title IV eligible, degree-granting institutions in the 1999-2000 academic year was segmented by state and normalized to the population of 18-24 year olds for each state. The 18-24 year old segment of the population was selected because it corresponds most closely to the population of individuals who were the most likely to be pursuing a bachelor's degree. In this way, the number of bachelor's degrees granted by individual states can be compared. In addition to reporting the number of degrees awarded for size of the potential student population, this method of normalization also removed any differences in the age distribution of the population in different states. This was particularly important for those states having a high percentage of retirees.

Relevance

The bachelor's degree represents a four-year course of study beyond high school. Students receiving the bachelor's degree may or may not have received an associate's degree. States ranking high in the number of bachelor's degrees granted as a percentage of population of 18-24 year olds have invested in their higher education infrastructure and have a population of young adults who believe higher education is an important investment in their future.

During the 1999-2000 academic year, 52% of the almost 2.4 million degrees awarded were bachelor's degrees. The total number of bachelor's degrees granted in the 50 states was 1,231,069. That was equivalent to 4.55% of the 18-24 year old population. The median equivalent percentage of bachelor's degrees granted in the 50 states was 4.87% of the 18-24 year old population.



Data Considerations and Limitations

Data on the number of bachelor's degrees awarded were provided by state coordinators for the Integrated Postsecondary Education Data System (IPEDS) or by officials at individual institutions. The IPEDS Fall 2000 data collection was the first full-scale web-based IPEDS data collection. Each institution appointed a keyholder, who was the person responsible for ensuring that the survey data submitted by the institution were correct. The IPEDS database indicated that there were 2,550 4-year degree granting institutions. Of these, 2,521 responded (98.9%) and 2,433 of the responses provided completions data (97.2%). For institutions that failed to provide completions data and met a series of predetermined conditions, completions data were imputed using methodologies such as Carry Forward, Nearest Neighbor, or Group Median. For bachelor's degrees, a total of 3,743 degrees was imputed, or 0.3% of the total number of bachelor's degrees.

The number of degrees awarded represents only the overall number of degrees awarded by institutions within a state. Degree recipients may include residents, out-of-state students, and foreign students. Data related to the degrees awarded by foreign institutions are not available by U.S. state of residence. Bachelor's degrees granted in Colorado, Connecticut, Maryland, and New York include data for U.S. Service Schools located in the state.

Source of Data

Total Bachelor's Degrees Granted:

U.S. Department of Education, National Center for Education Statistics, [E.D. Tabs]. *Postsecondary Institutions in the United States: Fall 2000 and Degrees and Other Awards Conferred: 1999-2000*, NCES 2002-156, by Laura G. Knapp, et.al.. Project Officer: Susan G. Broyles. Washington, DC: 2001.

Population, 18-24 Years Old:

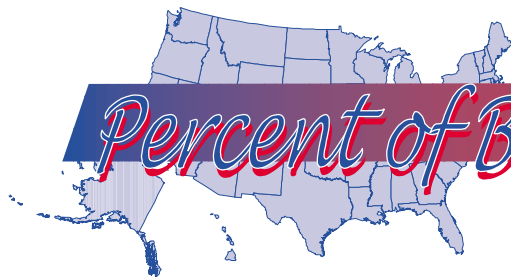
U.S. Census Bureau. *American Factfinder - Census 2000 Summary File 2 - Matrices PCT3 SEX BY AGE*. <http://factfinder.census.gov/servlet/DTTable?_ts=41948747704> (2002, June 12).

Total Bachelor's Degrees Granted as a Percent of the 18-24 Year Old Population: 1999-2000

STATE	Bachelor's Degrees Granted	2000 Population 18-24 Years of Age	INDICATOR VALUE *	Rank	Indicator Value Index **
Alabama	21,293	439,612	4.84%	26	107
Alaska	1,364	57,292	2.38%	49	52
Arizona	20,865	514,101	4.06%	36	89
Arkansas	9,405	261,738	3.59%	44	79
California	121,546	3,366,030	3.61%	42	79
Colorado	22,485	430,111	5.23%	18	115
Connecticut	15,072	271,585	5.55%	13	122
Delaware	4,665	75,328	6.19%	7	136
Florida	51,333	1,330,602	3.86%	40	85
Georgia	29,219	837,732	3.49%	46	77
Hawaii	5,091	114,893	4.43%	29	97
Idaho	4,711	138,829	3.39%	48	75
Illinois	55,036	1,210,898	4.55%	28	100
Indiana	31,970	614,721	5.20%	19	114
Iowa	18,750	298,008	6.29%	6	138
Kansas	14,234	275,592	5.16%	20	114
Kentucky	15,643	401,858	3.89%	39	86
Louisiana	19,844	473,801	4.19%	34	92
Maine	5,672	103,903	5.46%	14	120
Maryland	22,089	450,922	4.90%	25	108
Massachusetts	42,308	579,328	7.30%	4	161
Michigan	45,754	932,137	4.91%	24	108
Minnesota	23,175	470,434	4.93%	23	108
Mississippi	10,988	310,974	3.53%	45	78
Missouri	30,035	535,978	5.60%	12	123
Montana	5,171	85,757	6.03%	10	133
Nebraska	10,747	174,425	6.16%	8	135
Nevada	4,245	179,708	2.36%	50	52
New Hampshire	7,776	103,369	7.52%	3	165
New Jersey	26,939	676,628	3.98%	37	88
New Mexico	6,727	177,576	3.79%	41	83
New York	95,558	1,765,453	5.41%	15	119
North Carolina	35,257	806,821	4.37%	31	96
North Dakota	4,877	73,118	6.67%	5	147
Ohio	49,849	1,056,544	4.72%	27	104
Oklahoma	15,578	357,085	4.36%	32	96
Oregon	14,428	327,884	4.40%	30	97
Pennsylvania	66,273	1,094,449	6.06%	9	133
Rhode Island	8,402	106,607	7.88%	2	173
South Carolina	16,033	407,851	3.93%	38	86
South Dakota	4,494	77,634	5.79%	11	127
Tennessee	22,958	548,856	4.18%	35	92
Texas	75,834	2,198,881	3.45%	47	76
Utah	17,058	317,431	5.37%	16	118
Vermont	4,832	56,586	8.54%	1	188
Virginia	33,599	679,398	4.95%	22	109
Washington	24,002	559,361	4.29%	33	94
West Virginia	8,545	172,431	4.96%	21	109
Wisconsin	27,543	520,629	5.29%	17	116
Wyoming	1,797	49,928	3.60%	43	79
50 States	1,231,069	27,070,817	4.55%	—	100
Dist of Columbia	6,806	72,637	9.37%	—	206
Puerto Rico	N/A	—	—	—	—

* (Bachelor's Degrees Granted / 2000 Population 18-24 Years) x 100%

** 100 equals 50-state indicator value



Percent of Bachelor's Degrees in S&E

Definition

Science and engineering (S&E) bachelor's degrees are defined as bachelor's degrees with a major field of study in the area of natural sciences and mathematics and engineering. Specific disciplines include: agriculture and natural resources, biology, computer sciences, physical sciences, and engineering/technology. To calculate this metric, the number of bachelor's degrees awarded to students with one of these major fields of study was divided by the total number of bachelor's degrees awarded in the academic year 1999 – 2000.

Relevance

Bachelor's degrees can be granted in many fields of study and represent the initial level of specialization. The students earning bachelor's degrees in S&E are likely to be the technical workers of the future. The absolute number of bachelor's degrees in S&E gives an indication of the capacity of a state's higher education system to train technical workers. This number will vary widely and should be normalized to account for population differences before any comparison of technical training-capacity between states is made. (See data on population of 18-24 year olds in previous metric.)

The percent of bachelor's degrees granted in S&E provides an indication of the orientation of a state's higher education resources toward science and technology. If a state has relatively few institutions of higher learning and those institutions are heavily technology-oriented, the percentage of technical degrees will be high. Similarly, if students find departments in the areas of science and technology that are well-staffed, well-equipped, and doing interesting, cutting edge research they will tend to be attracted to those areas.

The total number of S&E bachelor's degrees granted during 1999-2000 in the 50 states was 213,101 or 17.3% of all bachelor's degrees granted. For the 50 states, the median percentage of bachelor's degrees awarded in S&E was 17.3%.

Data Considerations and Limitations

Data on the number of bachelor's degrees awarded were provided by state coordinators for the Integrated Postsecondary Education Data System (IPEDS) or by officials at individual institutions. The IPEDS Fall 2000 data collection was the first full-scale web-based IPEDS data collection. Each institution appointed a keyholder, who was the person responsible for ensuring that the survey data submitted by the institution were correct. The IPEDS database indicated that there were 2,550 4-year degree granting institutions. Of these, 2,521 responded (98.9%) and 2,433 of the responses provided completions data (97.2%). For institutions that failed to provide completions data and met a series of predetermined conditions, completions data were imputed using methodologies such as Carry Forward, Nearest Neighbor, or Group Median. For bachelor's degrees, a total of 3,743 degrees was imputed, or 0.3% of the total number of bachelor's degrees.

Source of Data

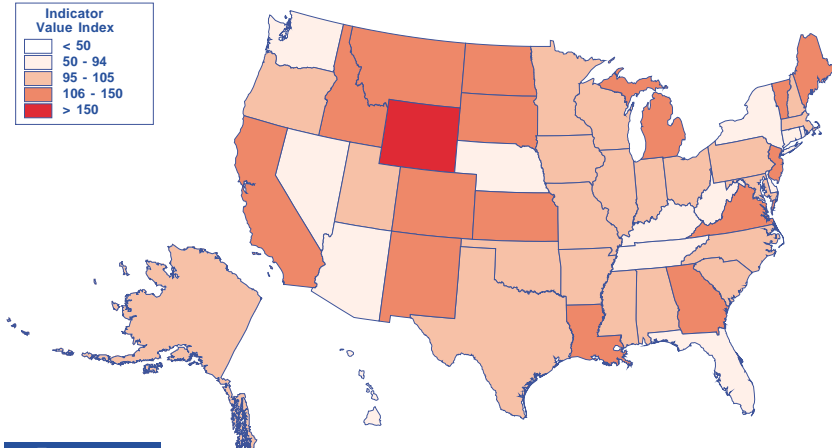
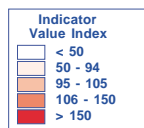
Data on the number and area of specialization of bachelor's degrees granted was compiled from the IPEDS database. For additional information available through IPEDS call (202) 219-1779.

Science and Engineering Bachelor's Degrees Granted:

Arrangements for special tabulations were made by Thomas Snyder, Program Director, Annual Reports Program-ECICSD, National Center for Education Statistics at (202) 502-7452 on March 4, 2002 per a special request from Taratec Corporation, Columbus, Ohio.

Total Bachelor's Degrees Granted:

U.S. Department of Education, National Center for Education Statistics, [E.D. Tabs]. *Postsecondary Institutions in the United States: Fall 2000 and Degrees and Other Awards Conferred: 1999-2000*, NCES 2002-156, by Laura G. Knapp, et.al.. Project Officer: Susan G. Broyles. Washington, DC: 2001.



Percent of Bachelor's Degrees Granted in Science and Engineering: 1999-2000

STATE	S&E Bachelor's Degrees Granted	Total Bachelor's Degrees Granted	INDICATOR VALUE *	Rank	Indicator Value Index **
Alabama	3,567	21,293	16.8%	34	97
Alaska	245	1,364	18.0%	20	104
Arizona	3,403	20,865	16.3%	39	94
Arkansas	1,610	9,405	17.1%	28	99
California	22,266	121,546	18.3%	16	106
Colorado	4,471	22,485	19.9%	6	115
Connecticut	1,837	15,072	12.2%	50	70
Delaware	746	4,665	16.0%	42	92
Florida	7,727	51,333	15.1%	47	87
Georgia	5,354	29,219	18.3%	15	106
Hawaii	718	5,091	14.1%	48	81
Idaho	1,041	4,711	22.1%	4	128
Illinois	9,471	55,036	17.2%	27	99
Indiana	5,764	31,970	18.0%	19	104
Iowa	3,381	18,750	18.0%	18	104
Kansas	2,673	14,234	18.8%	12	108
Kentucky	2,544	15,643	16.3%	40	94
Louisiana	3,655	19,844	18.4%	14	106
Maine	1,139	5,672	20.1%	5	116
Maryland	3,742	22,089	16.9%	31	98
Massachusetts	7,166	42,308	16.9%	32	98
Michigan	8,961	45,754	19.6%	8	113
Minnesota	4,035	23,175	17.4%	25	101
Mississippi	1,892	10,988	17.2%	26	99
Missouri	5,039	30,035	16.8%	33	97
Montana	1,256	5,171	24.3%	3	140
Nebraska	1,754	10,747	16.3%	38	94
Nevada	533	4,245	12.6%	49	73
New Hampshire	1,300	7,776	16.7%	35	97
New Jersey	5,117	26,939	19.0%	11	110
New Mexico	1,316	6,727	19.6%	9	113
New York	14,467	95,558	15.1%	46	87
North Carolina	6,235	35,257	17.7%	22	102
North Dakota	968	4,877	19.8%	7	115
Ohio	8,178	49,849	16.4%	37	95
Oklahoma	2,731	15,578	17.5%	24	101
Oregon	2,570	14,428	17.8%	21	103
Pennsylvania	11,662	66,273	17.6%	23	102
Rhode Island	1,283	8,402	15.3%	45	88
South Carolina	2,650	16,033	16.5%	36	95
South Dakota	1,093	4,494	24.3%	2	141
Tennessee	3,662	22,958	16.0%	43	92
Texas	12,915	75,834	17.0%	29	98
Utah	2,897	17,058	17.0%	30	98
Vermont	894	4,832	18.5%	13	107
Virginia	6,466	33,599	19.2%	10	111
Washington	3,879	24,002	16.2%	41	93
West Virginia	1,318	8,545	15.4%	44	89
Wisconsin	5,028	27,543	18.3%	17	105
Wyoming	482	1,797	26.8%	1	155
50 States	213,101	1,231,069	17.3%	—	100
Dist of Columbia	888	6,806	13.0%	—	75
Puerto Rico	N/A	N/A	—	—	—

* (S&E Bachelor's Degrees Granted / Total Bachelor's Degrees Granted) x 100%

** 100 equals 50-state indicator value



Definition

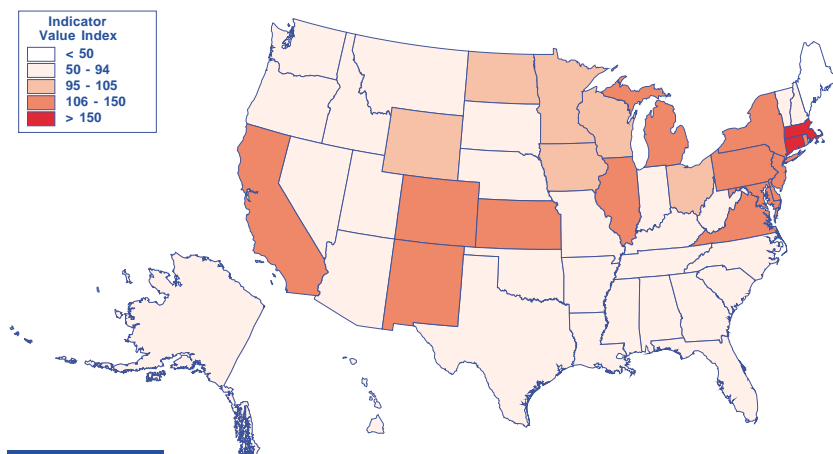
The total number of science and engineering (S&E) graduate students in each state was normalized by dividing by the 18-24 year old population in that state to calculate the S&E graduate students as a percent of the 18-24 year old population. This does not imply that all graduate students are 18-24 years old. Rather, it indicates the size of the population (according to age divisions used by the Bureau of the Census) from which the graduate students are most likely to be drawn. This approach corrects for differences in population of the various states and also minimizes any differences in age distribution of the general population between states. For instance, a disproportionate percentage of retirees in one state's population will not affect this metric for that state.

Relevance

This metric indicates where the next generation of scientists and engineers with advanced degrees are being trained for entry into the economic pipeline. States with the highest percentages of S&E graduate students have invested most heavily in creating the infrastructure to train students for advanced S&E degrees. The total number of S&E graduate students during 2000 in the 50 states was 404,413 which was equivalent to 1.49% of the 18-24 year old population. For the 50 states, the median number of S&E graduate students was equivalent to 1.28% of the 18-24 year old population.

Data Considerations and Limitations

The data pertaining to the number of S&E graduate students came from the fall 2000 National Science Foundation *Report of Graduate Students and Postdoctorates in Science and Engineering*. The data represent estimates of total enrollment in science and engineering programs in approximately 11,832 graduate departments at 596 institutions in the U.S. and outlying areas. It covers graduate enrollment and postdoctoral employment at the beginning of academic year 2000-2001 in all academic institutions in the U.S. that offer doctorate or master's degree programs in any science or engineering field including physical sciences, environmental sciences, mathematical sciences, computer sciences, agricultural sciences, life sciences, social sciences, psychology, medical sciences, and engineering.



Source of Data

Data on the number of S&E graduate students can be accessed electronically at <<http://www.nsf.gov/sbe/srs/gss/start.htm>>.

Science and Engineering Graduate Students:

National Science Foundation, Division of Science Resources Statistics. *Graduate Students and Postdoctorates in Science and Engineering: Fall 2000*, NSF 02-314, Project Officer, Joan S. Burrelli (Arlington, VA 2002).

Population, 18-24 Years Old:

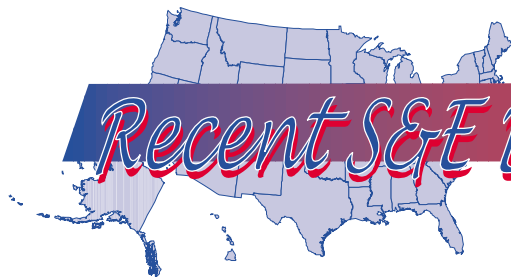
U.S. Census Bureau. *American Factfinder - Census 2000 Summary File 2 - Matrices PCT3 SEX BY AGE*. <http://factfinder.census.gov/servlet/DTTable?_ts=41948747704> (2002, June 12).

Science and Engineering Graduate Students as a Percent of the 18-24 Year Old Population: 2000

STATE	S&E Graduate Students	Population 18-24 Years of Age	INDICATOR VALUE *	Rank	Indicator Value Index **
Alabama	5,161	439,612	1.17%	31	79
Alaska	597	57,292	1.04%	41	70
Arizona	6,477	514,101	1.26%	27	84
Arkansas	1,958	261,738	0.75%	49	50
California	53,437	3,366,030	1.59%	15	106
Colorado	8,688	430,111	2.02%	5	135
Connecticut	6,266	271,585	2.31%	2	154
Delaware	1,414	75,328	1.88%	8	126
Florida	15,463	1,330,602	1.16%	34	78
Georgia	8,809	837,732	1.05%	40	70
Hawaii	1,412	114,893	1.23%	29	82
Idaho	1,309	138,829	0.94%	44	63
Illinois	22,964	1,210,898	1.90%	7	127
Indiana	7,931	614,721	1.29%	25	86
Iowa	4,646	298,008	1.56%	16	104
Kansas	5,722	275,592	2.08%	4	139
Kentucky	3,390	401,858	0.84%	46	56
Louisiana	5,474	473,801	1.16%	35	77
Maine	588	103,903	0.57%	50	38
Maryland	8,995	450,922	1.99%	6	134
Massachusetts	19,536	579,328	3.37%	1	226
Michigan	16,100	932,137	1.73%	10	116
Minnesota	6,749	470,434	1.43%	21	96
Mississippi	2,628	310,974	0.85%	45	57
Missouri	5,947	535,978	1.11%	37	74
Montana	1,199	85,757	1.40%	23	94
Nebraska	2,452	174,425	1.41%	22	94
Nevada	1,385	179,708	0.77%	48	52
New Hampshire	1,340	103,369	1.30%	24	87
New Jersey	11,135	676,628	1.65%	13	110
New Mexico	3,109	177,576	1.75%	9	117
New York	37,732	1,765,453	2.14%	3	143
North Carolina	9,917	806,821	1.23%	28	82
North Dakota	1,053	73,118	1.44%	20	96
Ohio	16,082	1,056,544	1.52%	17	102
Oklahoma	3,485	357,085	0.98%	43	65
Oregon	3,815	327,884	1.16%	33	78
Pennsylvania	18,300	1,094,449	1.67%	12	112
Rhode Island	1,709	106,607	1.60%	14	107
South Carolina	3,185	407,851	0.78%	47	52
South Dakota	866	77,634	1.12%	36	75
Tennessee	5,366	548,856	0.98%	42	65
Texas	28,117	2,198,881	1.28%	26	86
Utah	3,821	317,431	1.20%	30	81
Vermont	627	56,586	1.11%	38	74
Virginia	11,552	679,398	1.70%	11	114
Washington	5,905	559,361	1.06%	39	71
West Virginia	2,024	172,431	1.17%	32	79
Wisconsin	7,822	520,629	1.50%	19	101
Wyoming	754	49,928	1.51%	18	101
50 States	404,413	27,070,817	1.49%	—	100
Dist of Columbia	7,126	72,637	9.81%	—	657
Puerto Rico	2,944	428,894	0.69%	—	46

* (S&E Graduate Students / Population 18-24 Years) x 100%

** 100 equals 50-state indicator value



Definition

The number of individuals who had earned a bachelor's degree in the fields of science and engineering (S&E) as their highest degree during the academic years of 1990-1998 was identified from the National Science Foundation's Scientists and Engineers Statistical Data System (SESTAT) database. This group was segmented by employer location reported for the week of April 15, 1999. Excluded from the group were degree holders who were unemployed or not in the labor force at that time, as well as those who had earned recent S&E degrees from foreign institutions.

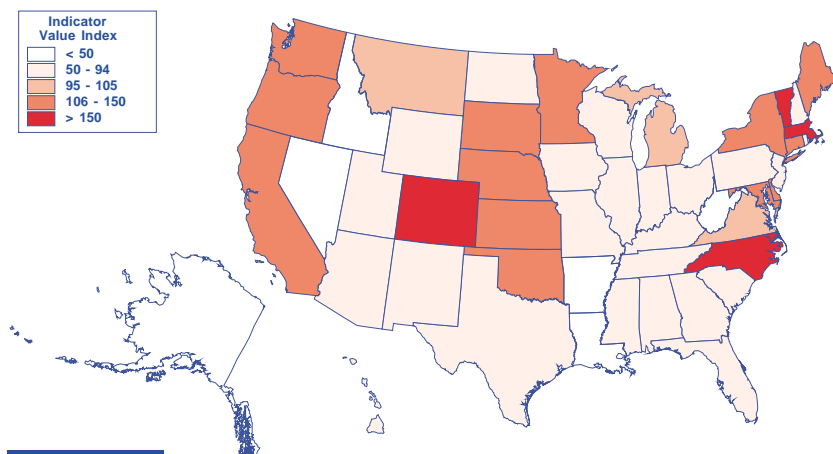
The percent of the civilian work force with a recent degree in science or engineering was calculated by dividing the number of bachelor's degree holders described above by the size of the 1999 civilian work force in that state. No attempt was made to identify or separate science and engineering bachelor's degree holders who were employed in a non-science and engineering field.

SESTAT is a database of the employment, education, and demographic characteristics of the nation's scientists and engineers. The National Science Foundation developed 1999 estimates based upon survey results from:

- The National Survey of College Graduates,
- The National Survey of Recent College Graduates, and
- The Survey of Doctorate Recipients.

Data on the size of the civilian work force in each state came from the Bureau of Labor Statistics.

The data for this metric are identical to that contained in the second edition. Data collected for 2001 are not expected to become available until late 2002 or early 2003.



Relevance

This metric indicates where recent graduates with bachelor's degrees in S&E are choosing to work. It reflects a number of individualistic location criteria related to quality of life, economic opportunities, family responsibilities, and continuing educational opportunities. Regardless of their reasons for selecting a particular location, the presence of large numbers of recent S&E graduates enriches a state's work force and catalyzes the transfer of current technical knowledge into the local economy.

In 1999, 1,973,510 recent S&E bachelor's degree holders were employed in the civilian labor force of the 50 states. They constituted 1.42% of civilian workers. The median state participation of recent S&E bachelor's degree holders was 1.29%.

Data Considerations and Limitations

The National Science Foundation provided estimates of the number of recent S&E bachelor's degree holders by state from a special tabulation of the 1999 SESTAT database. A special tabulation was needed because the data on recent graduates are not usually published at the state level.

Because the survey sample design for the SESTAT database does not include geography as part of the sampling strata, the reliability of the estimates in states with small populations is lower than in more highly populated states. The number of degree holders in each state was rounded to the nearest ten to reflect the precision justified by the statistical analysis.

Source of Data

Recent Science and Engineering Bachelor's Degrees:

Arrangements for the special tabulation of the 1999 SESTAT database were made by Kelly H. Kang, Senior Analyst, Science Resources Studies Division, National Science Foundation (kkang@nsf.gov) on April 24, 2001 per a special request from Taratec Corporation, Columbus, Ohio.

Civilian Labor Force:

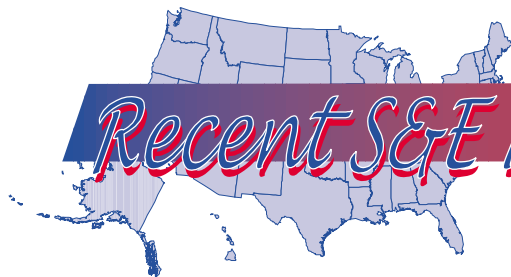
U.S. Department of Labor, Bureau of Labor Statistics. (2001, February 23). *State and Regional Unemployment, 2000 Annual Averages*. <ftp://146.142.4.23/pub/news.release/srgune.txt> (2001, March 21).

Percent of Civilian Work Force with a Recent Bachelor's Degree in Science or Engineering: 1999

STATE	Recent S&E Bachelor's Degrees Employed	Civilian Labor Force, thousands	INDICATOR VALUE *	Rank	Indicator Value Index **
Alabama	21,360	2,141	1.00%	38	70
Alaska	2,030	319	0.64%	47	45
Arizona	29,330	2,359	1.24%	29	88
Arkansas	5,110	1,229	0.42%	50	29
California	258,450	16,596	1.56%	16	110
Colorado	54,760	2,264	2.42%	3	170
Connecticut	29,990	1,708	1.76%	13	124
Delaware	6,940	390	1.78%	12	125
Florida	68,220	7,361	0.93%	41	65
Georgia	52,610	4,078	1.29%	26	91
Hawaii	4,200	593	0.71%	44	50
Idaho	4,490	651	0.69%	46	49
Illinois	76,250	6,378	1.20%	33	84
Indiana	36,820	3,076	1.20%	32	84
Iowa	19,080	1,573	1.21%	31	85
Kansas	28,350	1,434	1.98%	7	139
Kentucky	15,080	1,967	0.77%	42	54
Louisiana	14,400	2,052	0.70%	45	49
Maine	13,190	670	1.97%	8	139
Maryland	45,130	2,775	1.63%	15	115
Massachusetts	97,340	3,284	2.96%	1	209
Michigan	75,250	5,144	1.46%	18	103
Minnesota	51,780	2,703	1.92%	10	135
Mississippi	13,360	1,268	1.05%	37	74
Missouri	36,700	2,841	1.29%	25	91
Montana	6,720	474	1.42%	20	100
Nebraska	17,650	912	1.94%	9	136
Nevada	5,220	942	0.55%	48	39
New Hampshire	8,400	668	1.26%	27	89
New Jersey	51,600	4,205	1.23%	30	86
New Mexico	10,630	809	1.31%	24	93
New York	167,010	8,882	1.88%	11	132
North Carolina	94,020	3,868	2.43%	2	171
North Dakota	3,840	337	1.14%	35	80
Ohio	67,360	5,754	1.17%	34	82
Oklahoma	24,810	1,655	1.50%	17	106
Oregon	29,030	1,761	1.65%	14	116
Pennsylvania	57,900	5,976	0.97%	40	68
Rhode Island	4,970	504	0.99%	39	69
South Carolina	25,920	1,963	1.32%	22	93
South Dakota	8,190	400	2.05%	6	144
Tennessee	30,560	2,816	1.09%	36	76
Texas	134,360	10,219	1.31%	23	93
Utah	13,550	1,086	1.25%	28	88
Vermont	7,720	336	2.30%	4	162
Virginia	50,590	3,528	1.43%	19	101
Washington	64,560	3,075	2.10%	5	148
West Virginia	3,410	816	0.42%	49	29
Wisconsin	21,770	2,890	0.75%	43	53
Wyoming	3,500	262	1.34%	21	94
50 States	1,973,510	138,992	1.42%	—	100
Dist of Columbia	29,060	281	10.34%	—	728
Puerto Rico	11,680	1,302	0.90%	—	63

* (Recent S&E Bachelor's Degrees Employed / Civilian Labor Force) x 100%

** 100 equals 50-state indicator value



Recent S&E Master's in the Work Force

Definition

The number of individuals who had earned a master's degree in the fields of science and engineering (S&E) as their highest degree during the academic years of 1990-1998 was identified from the National Science Foundation's Scientists and Engineers Statistical Data System (SESTAT) database. This group was segmented by employer location reported for the week of April 15, 1999. Excluded from the group were degree holders who were unemployed or not in the labor force at that time, as well as those who had earned recent S&E degrees from foreign institutions.

The percent of the civilian work force with a recent degree in science or engineering was calculated by dividing number of master's degree holders described above by the size of the 1999 civilian work force in that state. No attempt was made to identify or separate science and engineering master's degree holders who were employed in a non-science and engineering field.

SESTAT is a database of the employment, education, and demographic characteristics of the nation's scientists and engineers. The National Science Foundation developed 1999 estimates based upon survey results from:

- The National Survey of College Graduates,
- The National Survey of Recent College Graduates, and
- The Survey of Doctorate Recipients.

Data on the size of the civilian work force in each state came from the Bureau of Labor Statistics.

The data for this metric are identical to that contained in the second edition. Data collected for 2001 are not expected to become available until late 2002 or early 2003.

Relevance

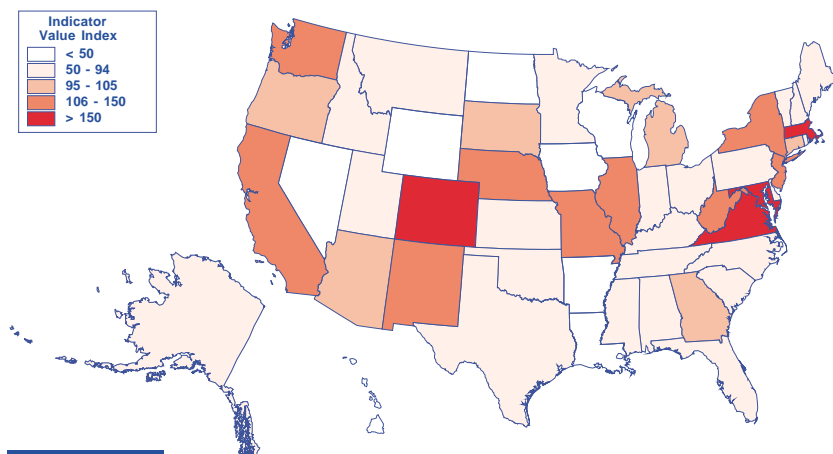
This metric indicates where recent graduates with master's degrees in S&E are choosing to work. It reflects a number of individualistic location criteria related to quality of life, economic opportunities, family responsibilities, and continuing educational opportunities. Regardless of their reasons for selecting a particular location, the presence of large numbers of recent S&E graduates enriches a state's work force and catalyzes the transfer of current technical knowledge into the local economy.

In 1999, 447,710 recent S&E master's degree holders were employed in the civilian labor force of the 50 states. They constituted 0.32% of civilian workers. The median state participation of recent S&E master's degree holders was 0.28%.

Data Considerations and Limitations

The National Science Foundation provided estimates of the number of recent S&E master's degree holders by state from a special tabulation of the 1999 SESTAT database. A special tabulation was needed because the data on recent graduates are not usually published at the state level.

Because the survey sample design for the SESTAT database does not include geography as part of the sampling strata, the reliability of the estimates in states with small populations is lower than in more highly populated states. The number of degree holders in each state was rounded to the nearest ten to reflect the precision justified by the statistical analysis.



Source of Data

Recent Science and Engineering Master's Degrees:

Arrangements for the special tabulation of the 1999 SESTAT database were made by Kelly H. Kang, Senior Analyst, Science Resources Studies Division, National Science Foundation (kkang@nsf.gov) on April 24, 2001 per a special request from Taratec Corporation, Columbus, Ohio.

Civilian Labor Force:

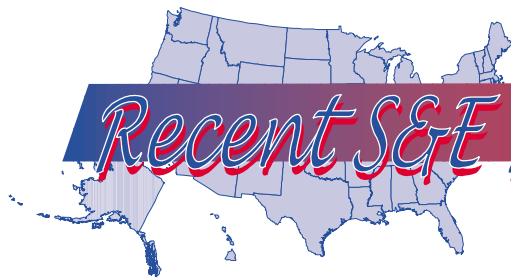
U.S. Department of Labor, Bureau of Labor Statistics. (2001, February 23). *State and Regional Unemployment, 2000 Annual Averages*. <ftp://146.142.4.23/pub/news.release/srgune.txt> (2001, March 21).

Percent of Civilian Work Force with a Recent Master's Degree in Science or Engineering: 1999

STATE	Recent S&E Master's Degrees Employed	Civilian Labor Force, thousands	INDICATOR VALUE *	Rank	Indicator Value Index **
Alabama	5,160	2,141	0.24%	35	75
Alaska	810	319	0.25%	33	79
Arizona	7,450	2,359	0.32%	17	98
Arkansas	1,900	1,229	0.15%	43	48
California	67,410	16,596	0.41%	8	126
Colorado	11,550	2,264	0.51%	3	158
Connecticut	5,740	1,708	0.34%	14	104
Delaware	1,040	390	0.27%	29	83
Florida	16,550	7,361	0.22%	38	70
Georgia	12,650	4,078	0.31%	19	96
Hawaii	620	593	0.10%	48	32
Idaho	1,700	651	0.26%	31	81
Illinois	24,340	6,378	0.38%	10	118
Indiana	7,360	3,076	0.24%	36	74
Iowa	2,290	1,573	0.15%	44	45
Kansas	4,330	1,434	0.30%	20	94
Kentucky	4,080	1,967	0.21%	39	64
Louisiana	2,640	2,052	0.13%	46	40
Maine	1,650	670	0.25%	34	76
Maryland	14,810	2,775	0.53%	2	166
Massachusetts	19,060	3,284	0.58%	1	180
Michigan	16,420	5,144	0.32%	16	99
Minnesota	7,060	2,703	0.26%	30	81
Mississippi	3,250	1,268	0.26%	32	80
Missouri	10,670	2,841	0.38%	12	117
Montana	850	474	0.18%	42	56
Nebraska	4,090	912	0.45%	5	139
Nevada	1,090	942	0.12%	47	36
New Hampshire	1,810	668	0.27%	27	84
New Jersey	16,860	4,205	0.40%	9	124
New Mexico	3,080	809	0.38%	11	118
New York	32,830	8,882	0.37%	13	115
North Carolina	10,840	3,868	0.28%	24	87
North Dakota	260	337	0.08%	50	24
Ohio	13,730	5,754	0.24%	37	74
Oklahoma	4,730	1,655	0.29%	23	89
Oregon	5,540	1,761	0.31%	18	98
Pennsylvania	16,310	5,976	0.27%	26	85
Rhode Island	1,350	504	0.27%	28	83
South Carolina	3,670	1,963	0.19%	41	58
South Dakota	1,300	400	0.33%	15	101
Tennessee	5,330	2,816	0.19%	40	59
Texas	30,320	10,219	0.30%	21	92
Utah	3,020	1,086	0.28%	25	86
Vermont	990	336	0.29%	22	91
Virginia	17,940	3,528	0.51%	4	158
Washington	13,470	3,075	0.44%	6	136
West Virginia	3,330	816	0.41%	7	127
Wisconsin	4,160	2,890	0.14%	45	45
Wyoming	270	262	0.10%	49	32
50 States	447,710	138,992	0.32%	—	100
Dist of Columbia	8,430	281	3.00%	—	931
Puerto Rico	1,420	1,302	0.11%	—	34

* (Recent S&E Master's Degrees Employed / Civilian Labor Force) x 100%

** 100 equals 50-state indicator value



Definition

The number of individuals who had earned a Ph.D. degree in the fields of science and engineering (S&E) as their highest degree during the academic years of 1990-1998 was identified from the National Science Foundation's 1999 Scientists and Engineers Statistical Data System (SESTAT) database. This group was segmented by employer location reported for the week of April 15, 1999. Excluded from the group were degree holders who were unemployed or not in the labor force at that time, as well as those who had earned recent S&E degrees from foreign institutions. Holders of doctoral level professional degrees such as those awarded in medicine, law, or education are not included.

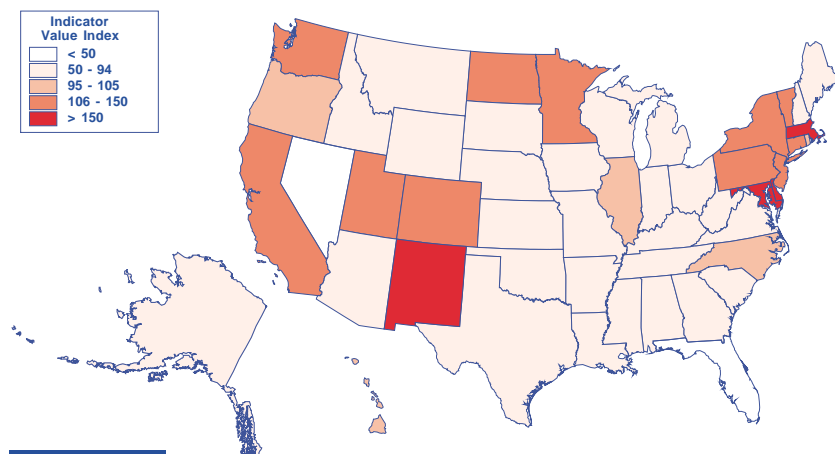
The percent of the civilian work force with a recent degree in science or engineering was calculated by dividing the number of Ph.D. degree holders described above by the size of the 1999 civilian work force in that state. No attempt was made to identify or separate S&E Ph.D. degree holders who were employed in a non-science and engineering field.

SESTAT is a database of the employment, education, and demographic characteristics of the nation's scientists and engineers. The National Science Foundation developed 1999 estimates based upon survey results from:

- The National Survey of College Graduates,
- The National Survey of Recent College Graduates, and
- The Survey of Doctorate Recipients.

Data on the size of the civilian work force in each state came from the Bureau of Labor Statistics.

The data for this metric are identical to that contained in the second edition. Data collected for 2001 are not expected to become available until late 2002 or early 2003.



Relevance

This metric indicates where recent graduates with doctorate degrees in S&E are choosing to work. It reflects a number of individualistic location criteria related to quality of life, economic opportunities, family responsibilities, and continuing educational opportunities. Regardless of their reasons for selecting a particular location, the presence of large numbers of recent S&E graduates enriches a state's work force and catalyzes the transfer of current technical knowledge into the local economy.

In 1999, 189,680 recent S&E doctorate degree holders were employed in the civilian labor force of the 50 states. They constituted 0.14% of civilian workers. The median state participation of recent S&E doctorate degree holders was 0.11%.

Data Considerations and Limitations

The National Science Foundation provided estimates of the number of recent S&E doctorate degree holders by state from a special tabulation of the 1999 SESTAT database. A special tabulation was needed because the data on recent graduates are not usually published at the state level.

Because the survey sample design for the SESTAT database does not include geography as part of the sampling strata, the reliability of the estimates in states with small populations is lower than in more highly populated states. The number of degree holders in each state was rounded to the nearest ten to reflect the precision justified by the statistical analysis.

Source of Data

Recent Science and Engineering Ph.D. Degrees:

Arrangements for the special tabulation of the 1999 SESTAT database were made by Kelly H. Kang, Senior Analyst, Science Resources Studies Division, National Science Foundation (kkang@nsf.gov) on April 24, 2001 per a special request from Taratec Corporation, Columbus, Ohio.

Civilian Labor Force:

U.S. Department of Labor, Bureau of Labor Statistics. (2001, February 23). *State and Regional Unemployment, 2000 Annual Averages*. <ftp://146.142.4.23/pub/news.release/srgune.txt> (2001, March 21).

Percent of Civilian Work Force with a Recent PhD in Science or Engineering: 1999

STATE	Recent S&E Doctorate Degrees Employed	Civilian Labor Force, thousands	INDICATOR VALUE *	Rank	Indicator Value Index **
Alabama	1,840	2,141	0.09%	40	63
Alaska	290	319	0.09%	37	67
Arizona	2,320	2,359	0.10%	35	72
Arkansas	1,110	1,229	0.09%	38	66
California	29,140	16,596	0.18%	9	129
Colorado	4,020	2,264	0.18%	7	130
Connecticut	3,200	1,708	0.19%	5	137
Delaware	950	390	0.24%	4	178
Florida	4,850	7,361	0.07%	49	48
Georgia	4,420	4,078	0.11%	28	79
Hawaii	850	593	0.14%	16	105
Idaho	800	651	0.12%	23	90
Illinois	8,770	6,378	0.14%	19	101
Indiana	3,310	3,076	0.11%	29	79
Iowa	1,420	1,573	0.09%	39	66
Kansas	1,170	1,434	0.08%	44	60
Kentucky	1,500	1,967	0.08%	46	56
Louisiana	1,890	2,052	0.09%	36	67
Maine	570	670	0.09%	42	62
Maryland	7,710	2,775	0.28%	3	204
Massachusetts	11,240	3,284	0.34%	1	251
Michigan	6,400	5,144	0.12%	22	91
Minnesota	4,250	2,703	0.16%	10	115
Mississippi	1,260	1,268	0.10%	34	73
Missouri	3,170	2,841	0.11%	26	82
Montana	540	474	0.11%	25	83
Nebraska	980	912	0.11%	30	79
Nevada	530	942	0.06%	50	41
New Hampshire	670	668	0.10%	33	73
New Jersey	7,510	4,205	0.18%	6	131
New Mexico	2,660	809	0.33%	2	241
New York	13,960	8,882	0.16%	11	115
North Carolina	5,330	3,868	0.14%	18	101
North Dakota	500	337	0.15%	14	109
Ohio	7,020	5,754	0.12%	24	89
Oklahoma	1,410	1,655	0.09%	41	62
Oregon	2,390	1,761	0.14%	20	99
Pennsylvania	8,620	5,976	0.14%	15	106
Rhode Island	710	504	0.14%	17	103
South Carolina	1,370	1,963	0.07%	48	51
South Dakota	340	400	0.09%	43	62
Tennessee	2,200	2,816	0.08%	45	57
Texas	11,250	10,219	0.11%	27	81
Utah	1,700	1,086	0.16%	12	115
Vermont	590	336	0.18%	8	129
Virginia	4,490	3,528	0.13%	21	93
Washington	4,600	3,075	0.15%	13	110
West Virginia	590	816	0.07%	47	53
Wisconsin	3,000	2,890	0.10%	31	76
Wyoming	270	262	0.10%	32	76
50 States	189,680	138,992	0.14%	—	100
Dist of Columbia	3,960	1.41%	3.00%	—	1033
Puerto Rico	550	1,302	0.04%	—	31

* (Recent S&E Doctorate Degrees Employed / Civilian Labor Force) x 100%

** 100 equals 50-state indicator value



Definition

Venture capital funds are equity investments made in private companies by the venture capital community. The amount of venture capital funds raised in 2001 per \$1,000 of gross state product (GSP) is calculated by dividing the total amount of venture capital invested in a state in 2001 by the 2000 GSP of the state which represents the most current data available. GSP is the output of goods and services produced by the labor and property located in the state.

Relevance

As a method of raising funds for growth and expansion, companies typically seek venture capital investments at an early stage in their growth prior to establishing a predictable sales history that would qualify them for other types of financing. Because of the risks involved with this type of investment, venture capitalists require higher rates of return and a greater degree of control in the company in exchange for their investment. This metric provides an indication of the role that venture capital financing plays in each state.

The industries and individual companies that venture capitalists choose to invest in reflect their opinions as to the sources of future wealth creation. Companies that attract venture capital investment are perceived to be working at the cutting edge of technology in their respective industries and are deemed to have a high chance for success.

In 2001, venture capital companies invested a total of \$41 billion in U.S. companies located in 48 states. This represents an investment equivalent to \$4.14 per \$1,000 of U.S. gross domestic product (GDP). The median amount of venture capital invested per \$1,000 of GSP in the 48 states was \$1.05.

Data Considerations and Limitations

This data came from the PricewaterhouseCooper/Venture Economics/National Venture Capital Association Money Tree™ Survey. The survey measures cash-for-equity investment by the professional venture capital community and similar entities in emerging private companies in the United States. It does not include debt, buyouts, recapitalizations, secondary purchases, IPO's, investments in public companies, or other forms of private equity involving services-in-kind or venture leasing. Also excluded are investments for which the proceeds are primarily intended for acquisitions, such as roll-ups and spinouts of operating divisions of established companies. Convertible debt and bridge loans are included only upon conversion to equity.

Data are obtained from a quarterly survey of venture capital practitioners augmented by other research techniques. In order for a company to be included in the results, it must have received at least one round of funding that involved a recognized, professional venture capital firm. If a company has received funding from a professional venture capital firm in a prior round, all subsequent rounds are included regardless of financing source. If a company receives its first round of funding from a professional venture capital firm in the current period, any investments from prior periods are included regardless of financing source. Therefore, results are updated periodically and are subject to change at any time.

Note: The scope of this survey may change from year to year. Unless data from previous years have been restated, they may not be directly comparable.

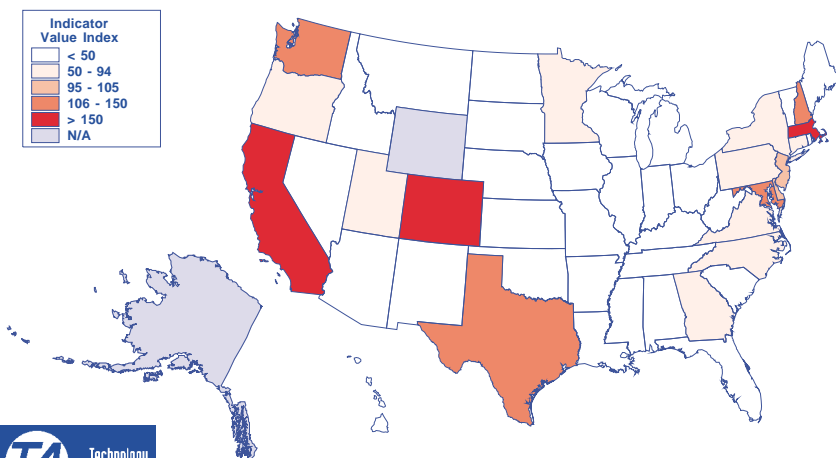
Source of Data

Venture Capital:

PricewaterhouseCoopers, Venture Economics, National Venture Capital Association *MoneyTree™* Survey.

Gross State Product:

U.S. Department of Commerce, Bureau of Economic Analysis. (2002, June). *Gross State Product: 2000*. <<http://www.bea.doc.gov/bea/regional/gsp>> (2002, June 10); Government of Puerto Rico, Office of the Governor. *Appendix Statistics: Table 1 - Selected Series of Income and Product, Total and Per Capita*. <<http://www.jp.gobierno.pr>>. (2002, May 10).

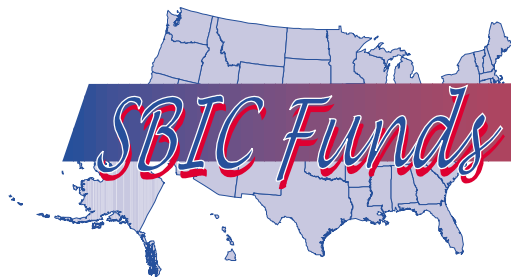


Amount of Venture Capital Funds Invested per \$1,000 of GSP: 2001

STATE	Venture Capital Invested, millions	2000 GSP, millions	INDICATOR VALUE *	Rank	Indicator Value Index **
Alabama	\$88	\$119,921	\$0.73	27	18
Alaska	N/A	—	—	—	—
Arizona	\$255	\$156,303	\$1.63	21	39
Arkansas	\$7	\$67,724	\$0.10	43	3
California	\$16,876	\$1,344,623	\$12.55	2	303
Colorado	\$1,500	\$167,918	\$8.93	3	216
Connecticut	\$529	\$159,288	\$3.32	11	80
Delaware	\$152	\$36,336	\$4.17	8	101
Florida	\$727	\$472,105	\$1.54	22	37
Georgia	\$874	\$296,142	\$2.95	13	71
Hawaii	\$38	\$42,364	\$0.89	26	22
Idaho	\$3	\$37,031	\$0.07	44	2
Illinois	\$807	\$467,284	\$1.73	20	42
Indiana	\$53	\$192,195	\$0.27	38	7
Iowa	\$6	\$89,600	\$0.07	45	2
Kansas	\$46	\$85,063	\$0.54	32	13
Kentucky	\$32	\$118,508	\$0.27	39	7
Louisiana	\$22	\$137,700	\$0.16	42	4
Maine	\$36	\$35,981	\$0.99	25	24
Maryland	\$980	\$186,108	\$5.27	4	127
Massachusetts	\$4,925	\$284,934	\$17.28	1	418
Michigan	\$145	\$325,384	\$0.45	35	11
Minnesota	\$542	\$184,766	\$2.93	14	71
Mississippi	\$30	\$67,315	\$0.45	36	11
Missouri	\$339	\$178,845	\$1.90	19	46
Montana	\$25	\$21,777	\$1.14	23	28
Nebraska	\$17	\$56,072	\$0.30	37	7
Nevada	\$39	\$74,745	\$0.52	33	13
New Hampshire	\$251	\$47,708	\$5.25	5	127
New Jersey	\$1,432	\$363,089	\$3.94	9	95
New Mexico	\$37	\$54,364	\$0.69	28	17
New York	\$2,189	\$799,202	\$2.74	15	66
North Carolina	\$616	\$281,741	\$2.19	16	53
North Dakota	\$1	\$18,283	\$0.05	46	1
Ohio	\$237	\$372,640	\$0.64	29	15
Oklahoma	\$23	\$91,773	\$0.25	40	6
Oregon	\$256	\$118,637	\$2.16	17	52
Pennsylvania	\$854	\$403,985	\$2.11	18	51
Rhode Island	\$40	\$36,453	\$1.11	24	27
South Carolina	\$23	\$113,377	\$0.20	41	5
South Dakota	\$1	\$23,192	\$0.02	48	1
Tennessee	\$97	\$178,362	\$0.55	31	13
Texas	\$3,242	\$742,274	\$4.37	7	106
Utah	\$222	\$68,549	\$3.24	12	78
Vermont	\$12	\$18,411	\$0.63	30	15
Virginia	\$954	\$261,355	\$3.65	10	88
Washington	\$1,049	\$219,937	\$4.77	6	115
West Virginia	\$2	\$42,271	\$0.04	47	1
Wisconsin	\$85	\$173,478	\$0.49	34	12
Wyoming	N/A	—	—	—	—
48 States	\$40,715	\$9,835,113	\$4.14	—	100
Dist of Columbia	\$202	\$59,397	\$3.39	—	82
Puerto Rico	\$5	\$41,366	\$0.12	—	3

* (Venture Capital Invested / 2000 GSP) x \$1,000

** 100 equals 48-state indicator value



Definition

Congress created the Small Business Investment Company (SBIC) Program in 1958 to fill the gap between available venture capital and the financial needs of small business in start-up and growth situations. The average annual amount of SBIC funds disbursed per \$1,000 of gross state product (GSP) was calculated by averaging the amount of SBIC funds invested in small business in a particular state for the three-year period from 1999-2001 and dividing by that state's 2000 GSP. GSP is the output of goods and services produced by the labor and property located in the state.

Relevance

SBICs are profit-motivated businesses that provide equity capital, long-term loans, debt-equity investments, and management assistance to small businesses. They are licensed by the Small Business Administration (SBA) and leverage their own capital with funds borrowed at favorable rates with an SBA guarantee. This metric provides an indication of the role that SBIC financing plays in each state.

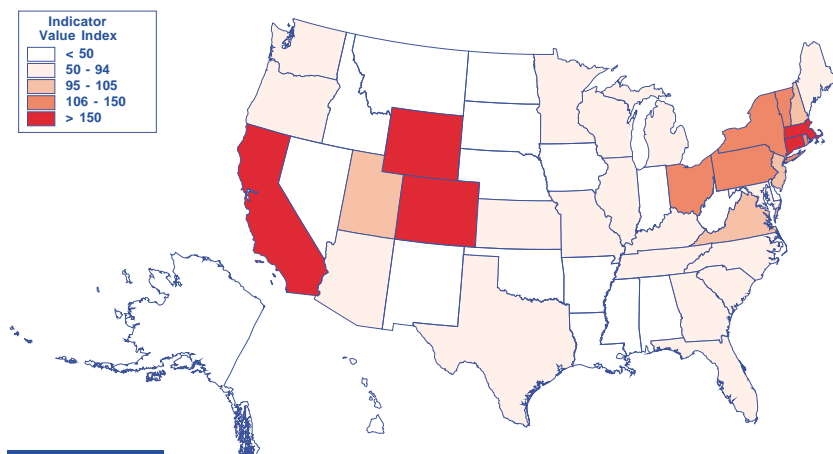
SBICs make funding available to all types of manufacturing and service industries, but many focus on companies with new products or services because of the strong growth potential of such firms. SBICs are prohibited from investing in other SBICs, finance and investment companies or finance-type leasing companies, unimproved real estate, companies with less than one-half of their assets and operations in the U.S., passive or casual businesses, or companies which will use the proceeds to acquire farm land. SBIC investment can take many forms including seed financing, start-up capi-

tal, early stage capital, expansion financing, later state financing, or MBO/LBO/Acquisition financing.

In the 50 states, SBICs made approximately 4,000 annual disbursements to small U.S. companies totaling \$4.7 billion annually. This represented an investment equivalent to \$0.47 per \$1,000 of U.S. gross domestic product. The median amount of SBIC funds disbursed per \$1,000 of GSP in the 50 states was \$0.31.

Data Considerations and Limitations

A three-year average of SBIC disbursements was used to minimize year-to-year variability. GSP data from 2000, the middle year of the three-year period, was used to normalize the disbursement data to account for differences in the size of a state's business base.



Source of Data

SBIC Funds Disbursed:

Small Business Administration. (2002, January 31). *SBIC Program Financing to Small Business - Table 7: ALL SBIC Program Licensees Financing to Small Businesses by State*. <<http://www.sba.gov/INV/stat/table7.pdf>> (2002, February 12).

Gross State Product:

U.S. Department of Commerce, Bureau of Economic Analysis. (2002, June). *Gross State Product: 2000*. <<http://www.bea.doc.gov/bea/regional/gsp>> (2002, June 10); Government of Puerto Rico, Office of the Governor. *Appendix Statistics: Table 1 - Selected Series of Income and Product, Total and Per Capita*. <<http://www.jp.gobierno.pr>>. (2002, May 10).

Average Annual Amount of SBIC Funds Disbursed per \$1,000 of GSP: 1999-2001

STATE	Avg. Annual Number of SBIC Funding Disbursements	Average Annual SBIC Funds Disbursed	2000 GSP, millions	INDICATOR VALUE *	Rank	Indicator Value Index **
Alabama	28.7	\$17,918,782	\$119,921	\$0.15	38	32
Alaska	0.0	\$0	\$27,747	\$0.00	50	0
Arizona	47.0	\$64,005,331	\$156,303	\$0.41	16	86
Arkansas	16.3	\$6,170,201	\$67,724	\$0.09	44	19
California	806.3	\$1,216,418,784	\$1,344,623	\$0.90	2	191
Colorado	88.7	\$160,835,436	\$167,918	\$0.96	1	202
Connecticut	81.3	\$124,140,126	\$159,288	\$0.78	4	164
Delaware	8.0	\$3,321,167	\$36,336	\$0.09	43	19
Florida	118.0	\$143,306,895	\$472,105	\$0.30	28	64
Georgia	103.3	\$118,841,575	\$296,142	\$0.40	18	85
Hawaii	3.7	\$801,967	\$42,364	\$0.02	49	4
Idaho	2.0	\$884,865	\$37,031	\$0.02	48	5
Illinois	344.7	\$200,272,312	\$467,284	\$0.43	15	90
Indiana	25.7	\$18,450,331	\$192,195	\$0.10	42	20
Iowa	16.7	\$18,841,125	\$89,600	\$0.21	33	44
Kansas	45.0	\$26,867,065	\$85,063	\$0.32	24	67
Kentucky	37.0	\$30,096,425	\$118,508	\$0.25	30	54
Louisiana	10.0	\$25,843,132	\$137,700	\$0.19	36	40
Maine	6.3	\$9,796,292	\$35,981	\$0.27	29	57
Maryland	73.7	\$64,345,334	\$186,108	\$0.35	22	73
Massachusetts	242.3	\$225,729,924	\$284,934	\$0.79	3	167
Michigan	56.0	\$76,566,598	\$325,384	\$0.24	32	50
Minnesota	68.7	\$74,499,750	\$184,766	\$0.40	17	85
Mississippi	15.7	\$13,843,258	\$67,315	\$0.21	35	43
Missouri	61.7	\$71,474,155	\$178,845	\$0.40	19	84
Montana	1.3	\$2,258,333	\$21,777	\$0.10	40	22
Nebraska	2.0	\$3,394,444	\$56,072	\$0.06	47	13
Nevada	15.3	\$7,363,878	\$74,745	\$0.10	41	21
New Hampshire	30.7	\$22,416,287	\$47,708	\$0.47	13	99
New Jersey	144.3	\$181,507,180	\$363,089	\$0.50	11	105
New Mexico	6.7	\$6,667,001	\$54,364	\$0.12	39	26
New York	538.7	\$485,405,972	\$799,202	\$0.61	6	128
North Carolina	56.0	\$93,326,995	\$281,741	\$0.33	23	70
North Dakota	1.0	\$1,533,333	\$18,283	\$0.08	45	18
Ohio	94.3	\$194,845,562	\$372,640	\$0.52	8	110
Oklahoma	13.0	\$18,970,168	\$91,773	\$0.21	34	44
Oregon	23.0	\$29,830,641	\$118,637	\$0.25	31	53
Pennsylvania	181.0	\$204,914,305	\$403,985	\$0.51	9	107
Rhode Island	15.3	\$18,275,004	\$36,453	\$0.50	10	106
South Carolina	22.0	\$35,776,727	\$113,377	\$0.32	25	67
South Dakota	2.0	\$1,754,600	\$23,192	\$0.08	46	16
Tennessee	53.7	\$67,607,487	\$178,362	\$0.38	21	80
Texas	227.3	\$286,117,300	\$742,274	\$0.39	20	81
Utah	56.0	\$31,859,217	\$68,549	\$0.46	14	98
Vermont	10.7	\$10,311,900	\$18,411	\$0.56	7	118
Virginia	77.3	\$125,909,081	\$261,355	\$0.48	12	102
Washington	71.7	\$69,113,239	\$219,937	\$0.31	26	66
West Virginia	9.0	\$6,642,275	\$42,271	\$0.16	37	33
Wisconsin	25.0	\$53,681,668	\$173,478	\$0.31	27	65
Wyoming	0.3	\$14,605,939	\$19,294	\$0.76	5	160
50 States	3,984	\$4,687,359,369	\$9,882,154	\$0.47	—	100
Dist of Columbia	12.0	\$23,973,149	\$59,397	\$0.40	—	85
Puerto Rico	5.3	\$2,320,972	\$41,366	\$0.06	—	12

* (Average Annual SBIC Funds Disbursed / 2000 GSP) / \$1,000

** 100 equals 50-state indicator value



Definition

Initial public offerings (IPOs) are another method by which companies raise capital for growth and expansion. The average annual amount of IPO funds raised per \$1,000 of gross state product (GSP) was calculated by taking the average annual amount of IPO funds raised by companies in the state for the period of 1999-2001 and dividing by the 2000 GSP for that state. GSP is the output of goods and services produced by the labor and property located in the state.

Relevance

IPOs occur when a privately owned company wishes to offer shares of its common stock to the public. This process is under the control of Securities and Exchange Commission. Companies are required to file appropriate documentation prior to being allowed to start trading. An IPO is one method available to a company for raising funds for expansion, product development, or acquisition. It is typically used by companies that have grown to the stage of having a predictable sales history. This metric provides an indication of the role that IPO financing plays in each state.

Total IPO activity (U.S. and foreign company offerings in the U.S. market) declined significantly in 2001, but the size of the average deal nearly doubled as investors turned to offerings from more mature companies. In 2001, there were only 91 IPOs with gross proceeds of \$41 billion, compared to 446 IPOs raising \$108 billion in 2000 and 537 IPOs raising \$95 billion in 1999. During this period, the average deal size rose from \$178 million in 1999 to \$242 million in 2000 and then to \$453 million in 2001.

In the 50 states, U.S. companies raised \$148.7 billion from 1999-2001 through initial public offerings for an average of \$49.6 billion annually. This represented an investment equivalent to \$5.02 per \$1,000 of U.S. gross domestic product. The median amount of IPO funds raised per \$1,000 of GSP in the 50 states was \$1.39.

Data Considerations and Limitations

For this metric, the average annual amount of IPO funds raised was calculated over a three-year period to reduce the year-to-year variability in the data.

The data includes all U.S.-based IPOs regardless of the stock type. Excluded are real estate investment trusts (REITs), bank conversions, closed-end funds, and over-the-counter offerings.

Source of Data

IPO Funds Raised:

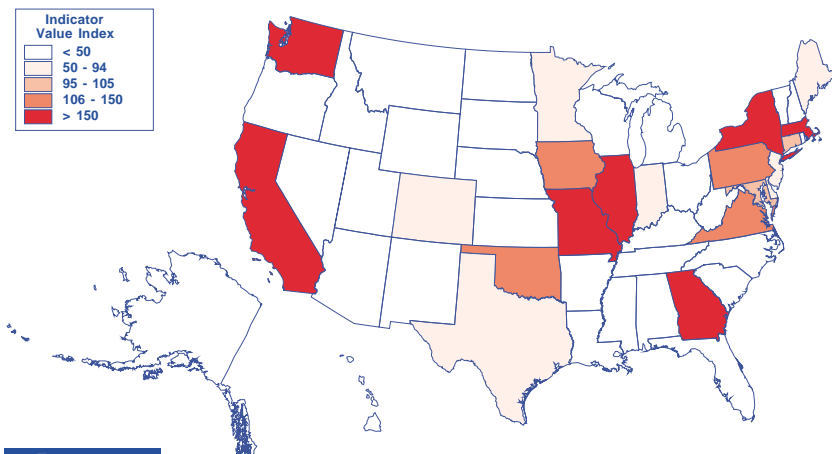
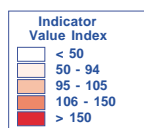
Hale and Dorr LLP. (2000, February 17). *1999 The IPO Report*. <http://www.haleanddorr.com/publications/ipo/ipo99_98/99report.pdf> (2000, February 25).

Hale and Dorr LLP. (2001, February 26). *2000 The IPO Report*. <http://www.haledorr.com/db30/cgi-bin/pubs/2000_IPO_report.pdf> (2001, June 13)

2001 IPO data were prepared by Timothy Gallagher (timothy.gallagher@haledorr.com) at Hale and Dorr LLP, Boston, MA, per a special request from Taratec Corporation, Columbus, Ohio.

Gross State Product:

U.S. Department of Commerce, Bureau of Economic Analysis. (2002, June). *Gross State Product: 2000*. <<http://www.bea.doc.gov/bea/regional/gsp>> (2002, June 10).



Average Annual Amount of IPO Funds Raised per \$1,000 of GSP: 1999-2001

STATE	Average Annual IPO Funds Raised, millions	2000 GSP, millions	INDICATOR VALUE *	Rank	Indicator Value Index **
Alabama	\$0	\$119,921	\$0.00	45	0
Alaska	\$47	\$27,747	\$1.68	25	34
Arizona	\$271	\$156,303	\$1.74	24	35
Arkansas	\$19	\$67,724	\$0.27	39	5
California	\$10,870	\$1,344,623	\$8.08	6	161
Colorado	\$771	\$167,918	\$4.59	14	92
Connecticut	\$765	\$159,288	\$4.80	13	96
Delaware	\$121	\$36,336	\$3.32	18	66
Florida	\$981	\$472,105	\$2.08	22	41
Georgia	\$2,686	\$296,142	\$9.07	4	181
Hawaii	\$18	\$42,364	\$0.41	36	8
Idaho	\$8	\$37,031	\$0.23	40	4
Illinois	\$3,880	\$467,284	\$8.30	5	166
Indiana	\$636	\$192,195	\$3.31	19	66
Iowa	\$617	\$89,600	\$6.88	8	137
Kansas	\$89	\$85,063	\$1.05	27	21
Kentucky	\$45	\$118,508	\$0.38	38	8
Louisiana	\$85	\$137,700	\$0.62	32	12
Maine	\$146	\$35,981	\$4.05	15	81
Maryland	\$945	\$186,108	\$5.08	12	101
Massachusetts	\$3,271	\$284,934	\$11.48	2	229
Michigan	\$735	\$325,384	\$2.26	21	45
Minnesota	\$495	\$184,766	\$2.68	20	53
Mississippi	\$56	\$67,315	\$0.84	31	17
Missouri	\$1,926	\$178,845	\$10.77	3	215
Montana	\$13	\$21,777	\$0.61	33	12
Nebraska	\$22	\$56,072	\$0.40	37	8
Nevada	\$40	\$74,745	\$0.53	35	11
New Hampshire	\$44	\$47,708	\$0.93	29	18
New Jersey	\$1,467	\$363,089	\$4.04	16	81
New Mexico	\$0	\$54,364	\$0.00	45	0
New York	\$6,086	\$799,202	\$7.62	7	152
North Carolina	\$242	\$281,741	\$0.86	30	17
North Dakota	\$0	\$18,283	\$0.00	45	0
Ohio	\$47	\$372,640	\$0.13	42	3
Oklahoma	\$542	\$91,773	\$5.91	10	118
Oregon	\$233	\$118,637	\$1.96	23	39
Pennsylvania	\$2,288	\$403,985	\$5.66	11	113
Rhode Island	\$7	\$36,453	\$0.20	41	4
South Carolina	\$4	\$113,377	\$0.03	44	1
South Dakota	\$2	\$23,192	\$0.09	43	2
Tennessee	\$195	\$178,362	\$1.09	26	22
Texas	\$2,692	\$742,274	\$3.63	17	72
Utah	\$67	\$68,549	\$0.97	28	19
Vermont	\$0	\$18,411	\$0.00	45	0
Virginia	\$1,562	\$261,355	\$5.98	9	119
Washington	\$4,424	\$219,937	\$20.12	1	401
West Virginia	\$0	\$42,271	\$0.00	45	0
Wisconsin	\$104	\$173,478	\$0.60	34	12
Wyoming	\$0	\$19,294	\$0.00	45	0
50 States	\$49,565	\$9,882,154	\$5.02	—	100
Dist of Columbia	\$196	\$59,397	\$3.29	—	66
Puerto Rico	N/A	—	—	—	—

* (Average Annual IPO Funds Raised / 2000 GSP) x \$1,000

** 100 equals 50-state indicator value



Definition

The number of business incubators available to serve 10,000 businesses in a particular state was calculated by dividing the total number of business incubators in that state in 2002 by the total number of businesses in the state and multiplying the result by 10,000. In this case, the data were normalized to the number of businesses since businesses represent the clients that the incubator is designed to serve. 2000 data on the number of businesses in a state was used since that is the most current data available.

Relevance

In addition to accessible capital, other resources can facilitate the growth and development of entrepreneurial companies. Business incubators offering specialized physical facilities at reduced rates, flexible lease terms, shared support services, business assistance services, and management coaching enable start-up companies to stretch their resources farther and to develop the internal capacity to grow their companies. The entire bundle of facilities and value added support services make the incubation program attractive to start-up companies. The success rate of businesses that have graduated from business incubators is significantly higher than that of start-up companies without this support, although it is not clear whether this success is due to the initial screening process that many incubators employ. Many states support business incubators as a means of stimulating economic development.

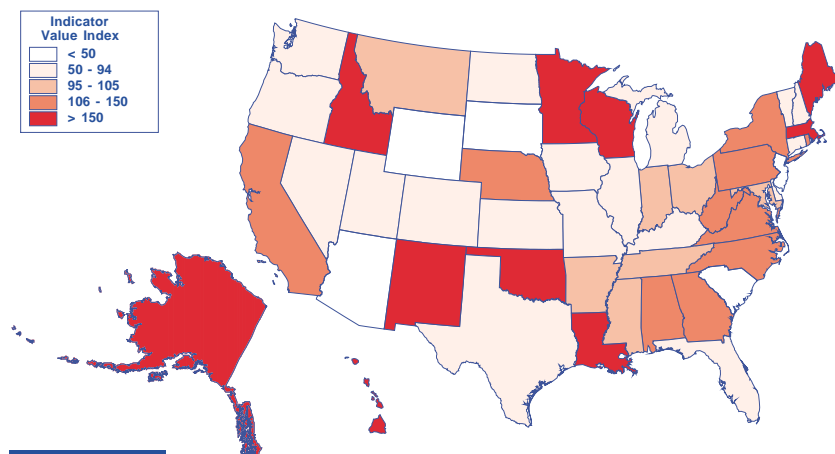
Over half of all North American business incubators are sponsored by government and non-profit organizations. Incubators

facilitate job creation, economic diversification, and/or expansion of the tax base. Another quarter of the business incubators are affiliated with academic institutions, and, in addition, these incubators provide opportunities to commercialize technology developed at the institution and investment opportunities for alumni, faculty, and associated groups.

In 2002, there were 930 incubators in the 50 states, which amounted to 1.32 incubators per 10,000 business establishments. The median number of business incubators per 10,000 business establishments in the 50 states was 1.28.

Data Considerations and Limitations

Data on the number and location of incubators came from the database of the National Business Incubation Association (NBIA), a not-for-profit 501(c)(3) membership organization headquartered in Athens, Ohio. NBIA identifies incubators from inquiries to their web site, referrals from other incubators, incubators who purchase materials through their bookstore, etc. Their database of business incubators appears to be the most complete nationwide listing available, and NBIA estimates that it covers more than 50% of the total U.S. incubators. However, there is no reliable method of determining exactly what fraction of the total number of incubators is included in the NBIA database.



Source of Data

Data on the number of incubators by state was furnished by the National Business Incubation Association (NBIA), 20 East Circle Drive, Suite 190, Athens, OH 45701. This data was compiled from the NBIA membership database.

Business Incubators:

National Business Incubation Association, 20 East Circle Drive, Suite 190, Athens, OH 45701 (2002, April).

Establishments:

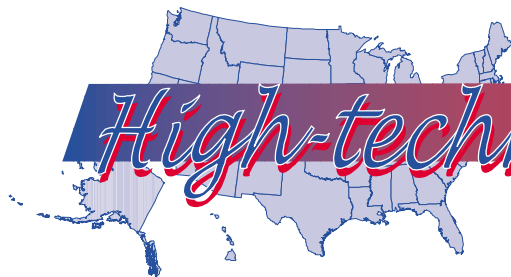
U.S. Census Bureau. *County Business Patterns - United States: 2000*. (2002, May). <<http://www.census.gov/prod/2002pubs/00cbp/cbp00-1.pdf>> (2002, June 12).

Number of Business Incubators per 10,000 Business Establishments: 2002

STATE	Business Incubators	2000 Establishments	INDICATOR VALUE *	Rank	Indicator Value Index **
Alabama	16	99,817	1.60	14	122
Alaska	4	18,501	2.16	7	164
Arizona	7	114,804	0.61	47	46
Arkansas	8	63,185	1.27	26	96
California	134	799,863	1.68	13	127
Colorado	15	137,528	1.09	30	83
Connecticut	9	92,436	0.97	34	74
Delaware	2	23,771	0.84	38	64
Florida	42	428,438	0.98	33	74
Georgia	28	200,442	1.40	20	106
Hawaii	6	29,853	2.01	10	152
Idaho	11	37,429	2.94	2	223
Illinois	28	308,067	0.91	36	69
Indiana	19	146,321	1.30	25	98
Iowa	6	80,890	0.74	41	56
Kansas	5	74,939	0.67	45	51
Kentucky	8	89,921	0.89	37	67
Louisiana	22	101,016	2.18	6	165
Maine	11	39,466	2.79	3	211
Maryland	17	128,467	1.32	24	100
Massachusetts	40	176,222	2.27	4	172
Michigan	16	236,912	0.68	44	51
Minnesota	28	139,080	2.01	9	153
Mississippi	8	59,788	1.34	23	101
Missouri	17	144,755	1.17	29	89
Montana	4	31,849	1.26	27	95
Nebraska	7	49,623	1.41	18	107
Nevada	6	48,178	1.25	28	94
New Hampshire	3	37,414	0.80	39	61
New Jersey	12	233,559	0.51	48	39
New Mexico	9	42,782	2.10	8	159
New York	72	492,073	1.46	17	111
North Carolina	31	203,903	1.52	16	115
North Dakota	2	20,139	0.99	32	75
Ohio	37	270,509	1.37	22	104
Oklahoma	19	85,094	2.23	5	169
Oregon	10	100,645	0.99	31	75
Pennsylvania	53	294,741	1.80	11	136
Rhode Island	4	28,534	1.40	19	106
South Carolina	6	97,146	0.62	46	47
South Dakota	1	23,783	0.42	49	32
Tennessee	18	130,876	1.38	21	104
Texas	33	471,509	0.70	43	53
Utah	4	55,379	0.72	42	55
Vermont	2	21,564	0.93	35	70
Virginia	27	175,582	1.54	15	117
Washington	13	164,018	0.79	40	60
West Virginia	7	41,047	1.71	12	129
Wisconsin	43	140,415	3.06	1	232
Wyoming	0	18,120	0.00	50	0
50 States	930	7,050,393	1.32	—	100
Dist of Columbia	2	19,655	1.02	—	77
Puerto Rico	N/A	N/A	—	—	—

* (Business Incubators / 2000 Establishments) x 10,000

** 100 equals 50-state indicator value



High-technology Establishments

Definition

This metric refers to the percentage of the total number of establishments within a state that fall into one of the 39 NAICS codes identified by the U.S. Department of Commerce as high-technology industries. High-technology industries are those with employment in both research and development and in all technology-oriented occupations that accounts for a proportion of employment that is at least twice the average for all industries in the Occupational Employment Statistics Survey. (See page 1-4 for a listing of high-technology NAICS codes.) High-technology occupations are scientific, technical, and engineering occupations that include engineers, life and physical scientists, mathematical specialists, engineering and science technicians, computer specialists, and engineering, scientific, and computer managers.

The percent of establishments in high-technology NAICS codes was calculated by dividing the number of establishments in the state in 1999 that were classified into one of the 39 high-technology NAICS codes by the total number of establishments in that state in 1999.

Relevance

The percentage of a state's business base that is classified as high-technology provides a measure of the extent to which the state's business base is poised to capitalize on new technology. High-technology industries include both manufacturing and service industries where technology is rapidly evolving. As the national economy shifts toward higher value-added products and IT and communications services, the states with the highest percentage of high-technology business establishments will be best poised to take advantage of this shift.

In 1999, there were 413,461 establishments in the 50 states that were classified in the high-technology NAICS codes. This represents 5.9% of the 6,988,975 total establishments in all 50 states in 1999. The median percentage of high-technology establishments out of all establishments in the 50 states was 5.1%.

Data Considerations and Limitations

Not all establishments that are identified by a single NAICS code will employ high-technology or high-technology workers to the same degree. Some may be very technically sophisticated while others may not have changed their mode of operation for many years. The data do not currently exist to perform this analysis on an establishment by establishment basis. Therefore, although NAICS code classifications represent only an approximation of technical sophistication, they are the best data available at this time. Certainly, there are establishments in other NAICS codes that employ high-technology and high-technology workers, and there are also some establishments in these 39 NAICS codes that do not. However, these 39 NAICS codes are thought to contain the highest percentage of companies that employ high-technology workers.

Please note that the definition of high-technology using NAICS codes has changed since the last edition of this publication so these data are not directly comparable with previously reported values.

Source of Data

The U.S. Census Bureau furnished the data for this metric from a special tabulation based upon the 6.9 million employer-establishments contained in the Standard Statistical Establishment List. This is the same database that is used to generate *County Business Patterns*. Arrangements for special tabulations can be made by contacting Trey Cole at the U.S. Census Bureau, Company Statistics Division in Washington, D.C. at (301) 457-3320.

High-technology Definition:

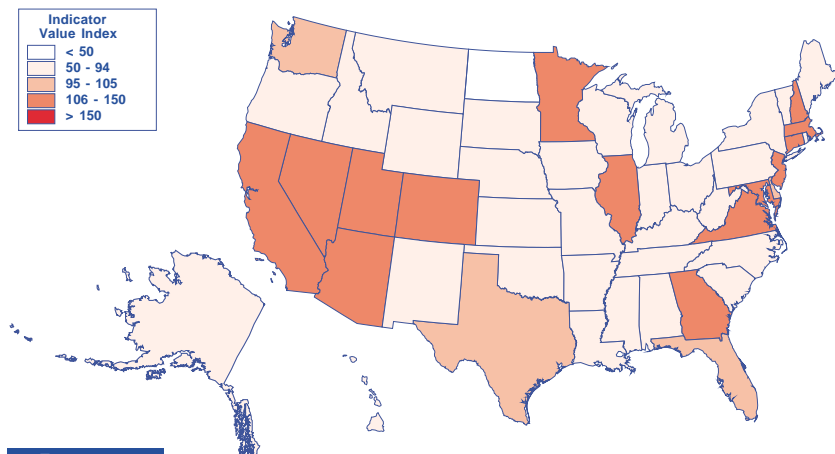
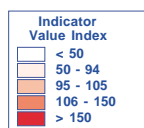
U.S. Department of Commerce.

High-technology Establishments:

These data were prepared by the U.S. Census Bureau under contract with Taratec Corporation, Columbus, Ohio.

Total Establishments:

U.S. Census Bureau, *County Business Patterns 1999*. U.S. Government Printing Office, Washington, DC, 2001.



Percent of Establishments in High-technology NAICS Codes: 1999

STATE	Establishments in High-tech NAICS Codes	Total Establishments	INDICATOR VALUE *	Rank	Indicator Value Index **
Alabama	4,162	100,507	4.1%	38	70
Alaska	762	18,433	4.1%	39	70
Arizona	7,155	112,545	6.4%	14	107
Arkansas	2,090	62,737	3.3%	45	56
California	57,602	784,935	7.3%	7	124
Colorado	10,865	133,743	8.1%	3	137
Connecticut	6,357	92,454	6.9%	10	116
Delaware	1,392	23,381	6.0%	16	101
Florida	25,037	424,089	5.9%	18	100
Georgia	12,706	197,759	6.4%	13	109
Hawaii	1,225	29,569	4.1%	37	70
Idaho	1,551	36,975	4.2%	36	71
Illinois	21,292	306,899	6.9%	9	117
Indiana	6,970	146,528	4.8%	28	80
Iowa	2,672	81,213	3.3%	46	56
Kansas	3,466	74,486	4.7%	30	79
Kentucky	3,495	89,946	3.9%	43	66
Louisiana	4,150	101,020	4.1%	40	69
Maine	1,667	38,878	4.3%	33	72
Maryland	9,713	127,431	7.6%	6	129
Massachusetts	14,281	173,267	8.2%	2	139
Michigan	13,081	236,456	5.5%	20	94
Minnesota	9,714	137,305	7.1%	8	120
Mississippi	1,835	59,834	3.1%	47	52
Missouri	6,558	144,874	4.5%	31	77
Montana	1,263	31,365	4.0%	42	68
Nebraska	1,858	48,968	3.8%	44	64
Nevada	3,021	46,890	6.4%	12	109
New Hampshire	2,846	37,180	7.7%	5	129
New Jersey	19,550	231,823	8.4%	1	143
New Mexico	2,192	42,918	5.1%	26	86
New York	26,291	485,954	5.4%	21	91
North Carolina	10,468	201,706	5.2%	24	88
North Dakota	592	20,380	2.9%	50	49
Ohio	14,481	270,766	5.3%	23	90
Oklahoma	3,774	84,854	4.4%	32	75
Oregon	5,576	99,945	5.6%	19	94
Pennsylvania	15,725	293,491	5.4%	22	91
Rhode Island	1,464	28,240	5.2%	25	88
South Carolina	4,102	96,440	4.3%	34	72
South Dakota	694	23,693	2.9%	49	50
Tennessee	5,520	131,116	4.2%	35	71
Texas	27,734	467,087	5.9%	17	100
Utah	3,529	53,809	6.6%	11	111
Vermont	1,079	21,598	5.0%	27	84
Virginia	13,423	173,550	7.7%	4	131
Washington	9,913	162,932	6.1%	15	103
West Virginia	1,243	41,451	3.0%	48	51
Wisconsin	6,598	139,646	4.7%	29	80
Wyoming	727	17,909	4.1%	41	69
50 States	413,461	6,988,975	5.9%	—	100
Dist of Columbia	2,005	19,469	10.3%	—	174
Puerto Rico	N/A	N/A	—	—	—

* (Establishments in High-tech NAICS Codes / Total Establishments) x 100%

** 100 equals 50-state indicator value



High-technology Employment

Definition

The percent of a state's employment in high-technology industries is found by dividing the employment in establishments classified in the 39 NAICS codes identified by the U.S. Department of Commerce as high-technology by the total employment within the state. High-technology industries are those with employment in both research and development and in all technology-oriented occupations that accounts for a proportion of employment that is at least twice the average for all industries in the Occupational Employment Statistics Survey.

Relevance

Like other metrics in this section, the percent of employment in establishments that are classified by high-technology SIC codes helps to assess the technical orientation of the business base in the state.

The percentage of employment in the high-technology sector can be compared to the percentage of business establishments that are classified by high-technology NAICS codes. This comparison indicates if high-technology establishments employ more people than the average establishment. Economic development organizations can use this measure to generate information regarding the relative importance of high-technology to the mix of businesses in their state.

In 1999, there were 9,802,256 employees in the 50 states who were working in establishments classified in the 39 high-technology NAICS codes. This represents 8.9% of the 110,301,289 total employees in all 50 states in 1999. The

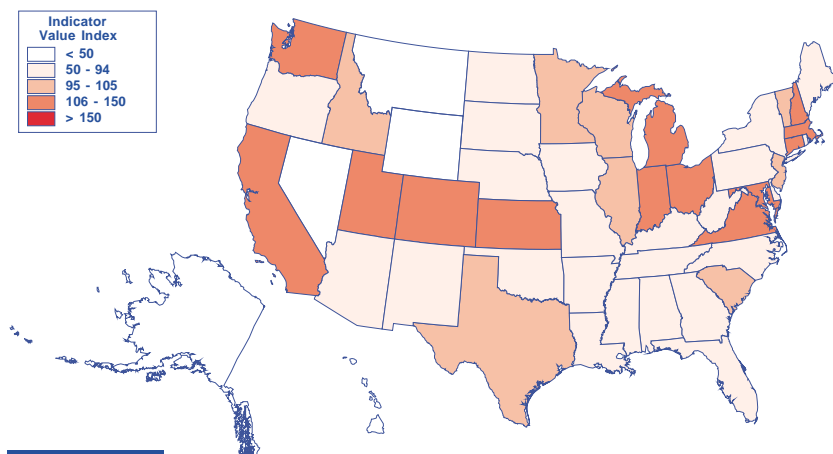
median percentage of total employment in high-technology establishments in the 50 states was 8.3%.

Data Considerations and Limitations

The U.S. Census Bureau provided this data from a special tabulation of employment counts by state for the aggregate of the 39 NAICS codes corresponding to high-technology industries. It was necessary to run a special tabulation because the data pertaining to some NAICS codes were suppressed for confidentiality reasons in *County Business Patterns, 1999*.

Data are suppressed when they will reveal establishment specific employment or payroll data, thereby violating the non-disclosure agreement between the establishment and the U.S. Census Bureau. This situation occurs when there are only a few businesses in a particular industry within the state or when the industry is dominated by a few large companies.

Please note that the definition of high-technology NAICS codes has changed since the last edition of this publication so these data are not directly comparable with previously reported values.



Source of Data

The U.S. Census Bureau furnished the data for this metric from a special tabulation based upon the 6.9 million employer-establishments contained in the Standard Statistical Establishment List. This is the same database that is used to generate *County Business Patterns*. Arrangements for special tabulations can be made by contacting Trey Cole at the U.S. Census Bureau, Company Statistics Division in Washington, D.C. at (301) 457-3320.

High-technology Definition:

U.S. Department of Commerce.

High-technology Employment:

These data were prepared by the U.S. Census Bureau under contract with Taratec Corporation, Columbus, Ohio.

Total Employment:

U.S. Census Bureau, *County Business Patterns 1999*. U.S. Government Printing Office, Washington, DC, 2001.

Percent of Employment in High-technology NAICS Codes: 1999

STATE	Employment in High-tech NAICS Codes	Total Employment	INDICATOR VALUE *	Rank	Indicator Value Index **
Alabama	117,681	1,633,909	7.2%	36	81
Alaska	6,660	198,459	3.4%	48	38
Arizona	152,917	1,838,277	8.3%	25	94
Arkansas	62,576	954,948	6.6%	39	74
California	1,335,536	12,356,363	10.8%	6	122
Colorado	176,315	1,821,717	9.7%	13	109
Connecticut	163,679	1,530,539	10.7%	7	120
Delaware	30,138	360,735	8.4%	22	94
Florida	328,324	5,954,982	5.5%	44	62
Georgia	244,728	3,363,797	7.3%	34	82
Hawaii	9,475	419,047	2.3%	50	25
Idaho	40,176	434,461	9.2%	15	104
Illinois	485,905	5,342,675	9.1%	17	102
Indiana	293,800	2,580,408	11.4%	4	128
Iowa	102,359	1,239,354	8.3%	26	93
Kansas	117,303	1,111,884	10.5%	9	119
Kentucky	120,628	1,469,315	8.2%	28	92
Louisiana	90,385	1,579,949	5.7%	42	64
Maine	24,051	475,149	5.1%	45	57
Maryland	199,997	1,988,950	10.1%	10	113
Massachusetts	371,152	2,971,052	12.5%	2	141
Michigan	513,378	3,996,300	12.8%	1	145
Minnesota	207,282	2,338,642	8.9%	18	100
Mississippi	56,924	948,883	6.0%	40	68
Missouri	195,800	2,350,965	8.3%	24	94
Montana	11,108	288,358	3.9%	47	43
Nebraska	57,370	733,905	7.8%	32	88
Nevada	28,180	854,358	3.3%	49	37
New Hampshire	56,455	528,902	10.7%	8	120
New Jersey	314,335	3,440,721	9.1%	16	103
New Mexico	43,489	541,386	8.0%	30	90
New York	497,419	7,135,960	7.0%	37	78
North Carolina	265,907	3,324,155	8.0%	31	90
North Dakota	16,562	250,292	6.6%	38	74
Ohio	478,007	4,867,368	9.8%	11	111
Oklahoma	84,772	1,171,356	7.2%	35	81
Oregon	111,244	1,332,403	8.3%	23	94
Pennsylvania	387,493	4,986,591	7.8%	33	87
Rhode Island	23,782	405,445	5.9%	41	66
South Carolina	137,783	1,561,727	8.8%	19	99
South Dakota	24,217	295,139	8.2%	29	92
Tennessee	192,935	2,338,780	8.2%	27	93
Texas	684,424	7,763,815	8.8%	20	99
Utah	86,233	889,355	9.7%	12	109
Vermont	21,262	246,320	8.6%	21	97
Virginia	326,351	2,791,977	11.7%	3	132
Washington	248,509	2,209,129	11.2%	5	127
West Virginia	31,039	545,495	5.7%	43	64
Wisconsin	219,624	2,368,404	9.3%	14	104
Wyoming	6,587	169,188	3.9%	46	44
50 States	9,802,256	110,301,289	8.9%	—	100
Dist of Columbia	34,325	404,372	8.5%	—	96
Puerto Rico	N/A	N/A	—	—	—

* (Employment in High-tech NAICS Codes / Total Employment) x 100%

** 100 equals 50-state indicator value



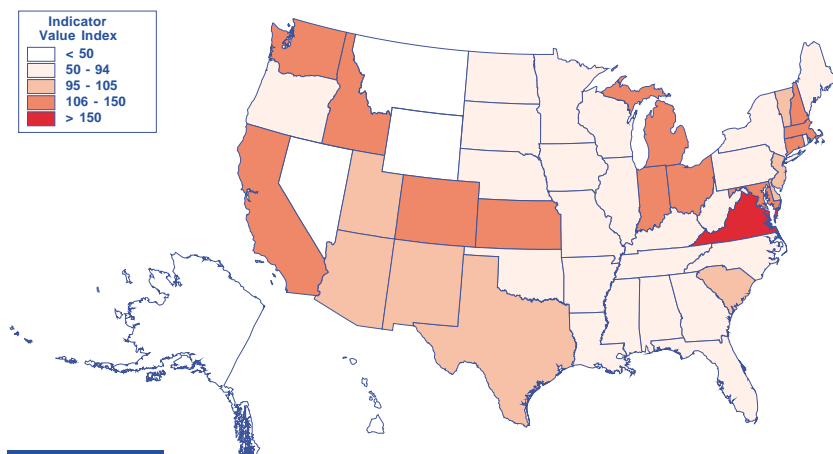
Definition

The percent of technology intensive payroll within a state is calculated by dividing the payroll for the 39 NAICS codes identified as high-technology by the U.S. Department of Commerce by the total payroll for all industries within the state. High-technology industries are those with employment in both research and development and in all technology-oriented occupations that accounts for a proportion of employment that is at least twice the average for all industries in the Occupational Employment Statistics Survey.

Relevance

This metric is useful in assessing the relative compensation levels of jobs in high-technology industries. It is helpful to view this metric in conjunction with the previous metric, the percent of employment in high-technology industries. If high-technology industries are creating a high percentage of well-paying jobs, the percent of a state's payroll from those industries will be higher than the percent of employment in those industries. If a state is attracting or growing companies in high-technology industries without significantly growing the high-technology payroll, it is likely that higher paying jobs are not being created, at which point some states might reassess their economic development strategies.

In 1999, there was \$517 billion in payroll in the 50 states in establishments classified in the 39 NAICS codes for high-technology industries. This represents 14.6% of the \$3,536 billion in total payroll for all 50 states in 1999. The median percentage of total payroll in high-technology establishments in the 50 states was 12.9%.



Data Considerations and Limitations

The U.S. Census Bureau provided this data from a special tabulation of payroll counts by state for the aggregate of the NAICS codes corresponding to high-technology industries. It was necessary to run a special tabulation because the data pertaining to some SIC codes were suppressed for confidentiality reasons in *County Business Patterns, 1999*.

Data are suppressed when they will reveal establishment specific employment or payroll data, thereby violating the non-disclosure agreement between the establishment and the U.S. Census Bureau. This situation occurs when there are only a few businesses in a particular industry within the state or when the industry is dominated by a few large companies.

Please note that the definition of high-technology NAICS codes has changed since the last edition of this publication so these data are not directly comparable with previously reported values.

Source of Data

The U.S. Census Bureau furnished the data for this metric from a special tabulation based upon the 6.9 million employer-establishments contained in the Standard Statistical Establishment List. This is the same database that is used to generate *County Business Patterns*. Arrangements for special tabulations can be made by contacting Trey Cole at the U.S. Census Bureau, Company Statistics Division in Washington, D.C. at (301) 457-3320.

High-technology Definition:

U.S. Department of Commerce.

High-technology Payroll:

These data were prepared by the U.S. Census Bureau under contract with Taratec Corporation, Columbus, Ohio.

Total Payroll:

U.S. Census Bureau, *County Business Patterns 1999*. U.S. Government Printing Office, Washington, DC, 2001.

Percent of Payroll in High-technology NAICS Codes: 1999

STATE	Payroll in High-tech NAICS Codes, thousands	Total Payroll, thousands	INDICATOR VALUE *	Rank	Indicator Value Index **
Alabama	\$5,049,875	\$42,453,530	11.9%	34	81
Alaska	\$367,161	\$7,108,281	5.2%	49	35
Arizona	\$7,510,083	\$52,954,561	14.2%	16	97
Arkansas	\$2,063,936	\$23,170,883	8.9%	43	61
California	\$86,533,973	\$446,547,247	19.4%	4	132
Colorado	\$10,131,467	\$59,775,138	16.9%	7	116
Connecticut	\$9,616,971	\$62,082,551	15.5%	13	106
Delaware	\$1,784,713	\$12,612,016	14.2%	18	97
Florida	\$14,734,292	\$160,961,646	9.2%	41	63
Georgia	\$12,266,144	\$103,836,505	11.8%	35	81
Hawaii	\$436,862	\$11,661,968	3.7%	50	26
Idaho	\$1,743,269	\$11,027,126	15.8%	11	108
Illinois	\$25,609,895	\$188,020,334	13.6%	23	93
Indiana	\$13,300,055	\$75,591,951	17.6%	6	120
Iowa	\$3,868,047	\$32,026,668	12.1%	32	83
Kansas	\$5,143,206	\$30,600,434	16.8%	8	115
Kentucky	\$5,453,968	\$39,540,856	13.8%	22	94
Louisiana	\$4,399,682	\$41,487,661	10.6%	37	72
Maine	\$973,802	\$12,586,264	7.7%	45	53
Maryland	\$10,737,772	\$64,183,349	16.7%	9	114
Massachusetts	\$24,275,152	\$115,269,583	21.1%	2	144
Michigan	\$27,648,478	\$138,301,024	20.0%	3	137
Minnesota	\$9,615,185	\$75,337,972	12.8%	27	87
Mississippi	\$1,758,929	\$22,172,251	7.9%	44	54
Missouri	\$8,672,857	\$68,536,025	12.7%	28	87
Montana	\$391,370	\$6,441,362	6.1%	46	42
Nebraska	\$2,350,638	\$19,435,923	12.1%	31	83
Nevada	\$1,298,832	\$24,391,383	5.3%	48	36
New Hampshire	\$2,684,307	\$16,060,229	16.7%	10	114
New Jersey	\$18,687,067	\$133,445,676	14.0%	20	96
New Mexico	\$1,930,392	\$13,638,579	14.2%	17	97
New York	\$26,681,358	\$294,640,576	9.1%	42	62
North Carolina	\$11,181,700	\$92,841,543	12.0%	33	82
North Dakota	\$552,316	\$5,789,027	9.5%	39	65
Ohio	\$23,237,417	\$148,512,614	15.6%	12	107
Oklahoma	\$3,267,058	\$29,887,654	10.9%	36	75
Oregon	\$5,133,979	\$39,706,937	12.9%	25	88
Pennsylvania	\$19,744,051	\$154,388,369	12.8%	26	87
Rhode Island	\$1,086,880	\$11,842,626	9.2%	40	63
South Carolina	\$5,740,358	\$40,900,431	14.0%	19	96
South Dakota	\$851,396	\$6,857,456	12.4%	30	85
Tennessee	\$8,202,667	\$65,963,770	12.4%	29	85
Texas	\$36,891,179	\$245,163,283	15.0%	15	103
Utah	\$3,559,660	\$23,363,993	15.2%	14	104
Vermont	\$879,967	\$6,336,255	13.9%	21	95
Virginia	\$23,876,093	\$93,167,636	25.6%	1	175
Washington	\$14,531,026	\$78,711,159	18.5%	5	126
West Virginia	\$1,349,400	\$13,513,976	10.0%	38	68
Wisconsin	\$9,252,323	\$69,270,659	13.4%	24	91
Wyoming	\$252,225	\$4,288,227	5.9%	47	40
50 States	\$517,309,433	\$3,536,405,167	14.6%	—	100
Dist of Columbia	\$2,223,661	\$18,287,742	12.2%	—	83
Puerto Rico	N/A	N/A	—	—	—

* (Payroll in High-tech NAICS Codes / Total Payroll) x 100%

** 100 equals 50-state indicator value



High-technology Establishment Births

Definition

Establishment births are identified as employer-establishments that did not exist according to the records of the Standard Statistical Establishment List housed at the U.S. Census Bureau during 1998 and came into existence at one geographic location and were placed on record during 1999. The percent of establishment births in high-technology industries was determined by dividing the total number of establishment births within the 39 high-technology NAICS codes by the total number of establishment births in all industries within the state.

Relevance

This metric provides an indication of the degree to which establishment births are concentrated in high-technology NAICS codes. States with high percentages of high-technology establishment births are making progress in shifting their business base toward the high-technology sector.

The number of high-technology establishment births and the number of total establishment births also provide useful information when they are normalized to the number of establishments within a state. The number of establishment births per 10,000 business establishments indicates how supportive the state's business climate is to the formation of new businesses and how strong the sense of entrepreneurship is in that state. Likewise, the number of high-technology establishment births per 10,000 business establishments indicates how supportive the state's business climate is to the formation of new high-technology businesses.

For the 50 states, there were 55,027 establishment births in the 39 high-technology NAICS codes out of 711,187 total births or 7.7%. The median percentage of establishment births in high-technology NAICS codes for the 50 states was 6.8%.

Data Considerations and Limitations

The U.S. Census Bureau defines an establishment as a single physical location at which business is conducted. An establishment is not necessarily identical to a company, because a company can consist of one or more establishments. For an establishment to be counted as a birth during 1999 it must be a new operation at a new physical location, employing one or more full or part-time paid employees at that location. It must have also had an Employer Identification Number (EIN) assigned by the IRS. Only when an establishment, as defined above, did not exist in 1998 and did exist in 1999 is it counted as a birth.

Please note that the definition of high-technology NAICS codes has changed since the last edition of this publication so these data are not directly comparable with previously reported values.

Source of Data

The U.S. Census Bureau furnished the data for this metric from a special tabulation based upon the 6.9 million employer-establishments contained in the Standard Statistical Establishment List. This is the same database that is used to generate *County Business Patterns*. Arrangements for special tabulations can be made by contacting Trey Cole at the U.S. Census Bureau, Company Statistics Division in Washington, D.C. at (301) 457-3320.

High-technology Definition:

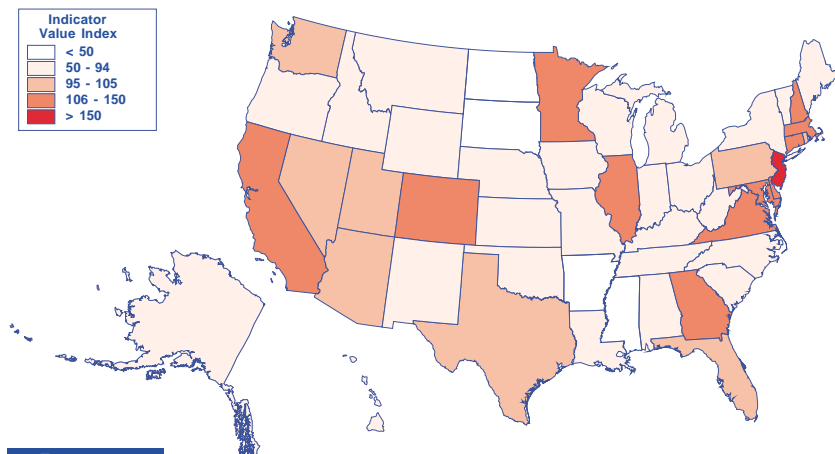
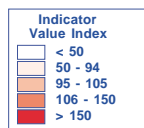
U.S. Department of Commerce.

High-technology and Total Establishment Births:

These data were prepared by the U.S. Census Bureau under contract with Taratec Corporation, Columbus, Ohio.

Total Establishments:

U.S. Census Bureau, *County Business Patterns* 1999. U.S. Government Printing Office, Washington, DC, 2001.



Percent of Establishment Births in High-technology NAICS Codes: 1999

STATE	Establishment Births in High-tech NAICS Codes	Total Establishment Births	Total Establishments	INDICATOR VALUE *	Rank	Indicator Value Index **
Alabama	526	9,995	100,507	5.3%	37	68
Alaska	99	1,807	18,433	5.5%	34	71
Arizona	1,041	13,947	112,545	7.5%	19	96
Arkansas	245	6,402	62,737	3.8%	47	49
California	7,941	87,202	784,935	9.1%	9	118
Colorado	1,578	15,876	133,743	9.9%	5	128
Connecticut	681	7,903	92,454	8.6%	10	111
Delaware	222	2,629	23,381	8.4%	11	109
Florida	3,856	51,601	424,089	7.5%	18	97
Georgia	1,928	22,992	197,759	8.4%	12	108
Hawaii	156	2,569	29,569	6.1%	32	78
Idaho	192	4,202	36,975	4.6%	44	59
Illinois	2,756	27,784	306,899	9.9%	6	128
Indiana	841	12,805	146,528	6.6%	27	85
Iowa	281	6,539	81,213	4.3%	45	56
Kansas	451	6,897	74,486	6.5%	28	85
Kentucky	443	8,592	89,946	5.2%	38	67
Louisiana	468	9,605	101,020	4.9%	41	63
Maine	230	3,781	38,878	6.1%	31	79
Maryland	1,377	12,573	127,431	11.0%	3	142
Massachusetts	1,731	18,092	173,267	9.6%	8	124
Michigan	1,447	21,072	236,456	6.9%	25	89
Minnesota	1,278	12,720	137,305	10.0%	4	130
Mississippi	216	6,078	59,834	3.6%	49	46
Missouri	824	13,908	144,874	5.9%	33	77
Montana	157	3,068	31,365	5.1%	39	66
Nebraska	219	4,077	48,968	5.4%	36	69
Nevada	542	6,952	46,890	7.8%	13	101
New Hampshire	337	3,447	37,180	9.8%	7	126
New Jersey	2,744	22,938	231,823	12.0%	1	155
New Mexico	304	4,574	42,918	6.6%	26	86
New York	3,475	47,678	485,954	7.3%	22	94
North Carolina	1,466	21,299	201,706	6.9%	24	89
North Dakota	52	1,517	20,380	3.4%	50	44
Ohio	1,634	22,400	270,766	7.3%	21	94
Oklahoma	470	8,611	84,854	5.5%	35	71
Oregon	684	10,548	99,945	6.5%	29	84
Pennsylvania	1,867	24,647	293,491	7.6%	16	98
Rhode Island	187	2,436	28,240	7.7%	15	99
South Carolina	525	10,457	96,440	5.0%	40	65
South Dakota	81	2,136	23,693	3.8%	48	49
Tennessee	647	13,382	131,116	4.8%	42	62
Texas	3,858	52,255	467,087	7.4%	20	95
Utah	540	6,991	53,809	7.7%	14	100
Vermont	143	1,996	21,598	7.2%	23	93
Virginia	2,002	17,295	173,550	11.6%	2	150
Washington	1,338	17,875	162,932	7.5%	17	97
West Virginia	166	3,614	41,451	4.6%	43	59
Wisconsin	707	11,581	139,646	6.1%	30	79
Wyoming	74	1,842	17,909	4.0%	46	52
50 States	55,027	711,187	6,988,975	7.7%	—	100
Dist of Columbia	286	1,815	19,469	15.8%	—	204
Puerto Rico	N/A	N/A	N/A	—	—	—

* (Establishment Births in High-tech NAICS Codes / Total Establishment Births) x 100%

** 100 equals 50-state indicator value



Net High-technology Business Formations

Definition

In this metric, net high-technology establishment formations are equal to the number of establishments, classified in one of the 39 NAICS codes defined as high-technology by the U.S. Department of Commerce, that began operations in 1999 minus the number of establishments in the same set of NAICS codes that ceased operations during the same year. The net high-technology establishment formations were normalized to the total number of business establishments in the state to eliminate the scale sensitivity.

Relevance

This metric provides a measure of the state's ability to create and sustain formation of new high-technology businesses. Net formation of high-technology establishments was positive for 49 states indicating that, in 1999, technology intensive establishments were being formed faster than they were dying across the nation. The ratio of net establishment formations in high-technology NAICSs to the number of establishments in the state provides a measure of the progress that a state is making in adding to its high-technology sector.

For the 50 states, there were 55,027 establishment births and 41,900 establishment deaths in the 39 high-technology NAICS codes for a net gain of 13,127. This equates to a net formation of 18.8 high-technology establishments per 10,000 business establishments. The median net number of high-technology establishment formations per 10,000 business establishments in the 50 states was 14.0.

Data Considerations and Limitations

The U.S. Census Bureau defines an establishment as a single physical location at which business is conducted. An establishment is not necessarily identical to a company because a company can consist of one or more establishments. For an establishment formation to be counted during 1999, a company must have begun conducting operations in 1999 at an entirely new physical location (not a relocation). Changes in company name, ownership, or address that occur during the year are not counted as formations because the new and old Employer Identification Numbers (EINs) are linked in the U.S. Census Bureau records. Similarly, for a death to be counted during 1999, the company must have been conducting operations at its location in 1998 with one or more full or part-time paid employees and ceased all operations at its location and not resumed any operations at any new physical location during 1999. It must have also had an EIN assigned by the IRS during 1998. Only when an establishment, as defined above, did exist in 1998 and did not exist in 1999 is it counted as a death.

Caution must be exercised in interpreting this metric. The data represent only the events from a single year and are subject to year-to-year variability. In states with only a small business base, small fluctuations can cause a dramatic shift in this metric's value.

Please note that the definition of high-technology NAICS codes has changed since the last edition of this publication so these data are not directly comparable with previously reported values.

Source of Data

The U.S. Census Bureau furnished the data for this metric from a special tabulation based upon the 6.9 million employer-establishments contained in the Standard Statistical Establishment List. This is the same database that is used to generate *County Business Patterns*. Arrangements for special tabulations can be made by contacting Trey Cole at the U.S. Census Bureau, Company Statistics Division in Washington, D.C. at (301) 457-3320.

High-technology Definition:

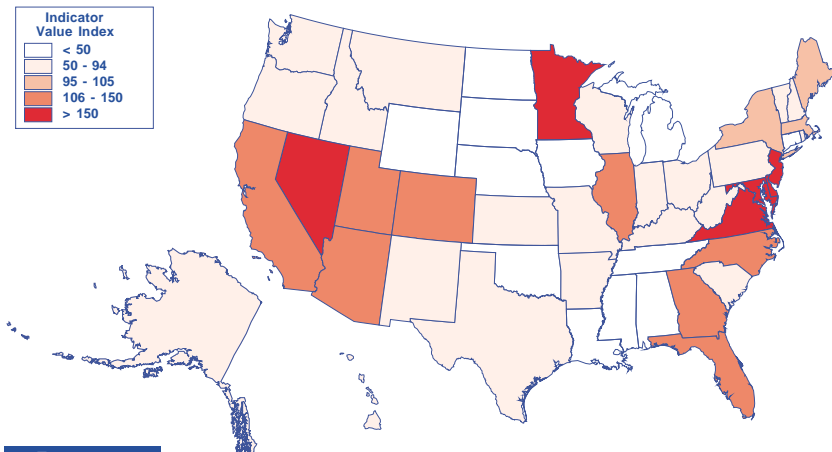
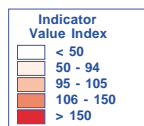
U.S. Department of Commerce.

High-technology Establishment Births and Deaths:

These data were prepared by the U.S. Census Bureau under contract with Taratec Corporation, Columbus, Ohio.

Total Establishments:

U.S. Census Bureau, *County Business Patterns* 1999. U.S. Government Printing Office, Washington, DC, 2001.



Net Formations of High-technology Establishments per 10,000 Business Establishments: 1999

STATE	Estab Births in High-tech NAICS Codes	Estab Deaths in High-tech NAICS Codes	Net Formations	Total Establishments	INDICATOR VALUE *	Rank	Indicator Value Index**
Alabama	526	445	81	100,507	8.1	40	43
Alaska	99	77	22	18,433	11.9	33	64
Arizona	1,041	795	246	112,545	21.9	14	116
Arkansas	245	178	67	62,737	10.7	36	57
California	7,941	5,994	1,947	784,935	24.8	10	132
Colorado	1,578	1,211	367	133,743	27.4	7	146
Connecticut	681	615	66	92,454	7.1	41	38
Delaware	222	148	74	23,381	31.6	5	169
Florida	3,856	2,906	950	424,089	22.4	13	119
Georgia	1,928	1,404	524	197,759	26.5	9	141
Hawaii	156	114	42	29,569	14.2	25	76
Idaho	192	145	47	36,975	12.7	30	68
Illinois	2,756	1,926	830	306,899	27.0	8	144
Indiana	841	621	220	146,528	15.0	22	80
Iowa	281	226	55	81,213	6.8	42	36
Kansas	451	349	102	74,486	13.7	27	73
Kentucky	443	315	128	89,946	14.2	24	76
Louisiana	468	470	-2	101,020	-0.2	50	-1
Maine	230	155	75	38,878	19.3	16	103
Maryland	1,377	963	414	127,431	32.5	4	173
Massachusetts	1,731	1,392	339	173,267	19.6	15	104
Michigan	1,447	1,299	148	236,456	6.3	43	33
Minnesota	1,278	885	393	137,305	28.6	6	152
Mississippi	216	216	0	59,834	0.0	49	0
Missouri	824	653	171	144,874	11.8	34	63
Montana	157	116	41	31,365	13.1	29	70
Nebraska	219	176	43	48,968	8.8	39	47
Nevada	542	326	216	46,890	46.1	1	245
New Hampshire	337	287	50	37,180	13.4	28	72
New Jersey	2,744	1,888	856	231,823	36.9	2	197
New Mexico	304	256	48	42,918	11.2	35	60
New York	3,475	2,562	913	485,954	18.8	17	100
North Carolina	1,466	1,013	453	201,706	22.5	12	120
North Dakota	52	42	10	20,380	4.9	45	26
Ohio	1,634	1,232	402	270,766	14.8	23	79
Oklahoma	470	420	50	84,854	5.9	44	31
Oregon	684	584	100	99,945	10.0	38	53
Pennsylvania	1,867	1,391	476	293,491	16.2	19	86
Rhode Island	187	148	39	28,240	13.8	26	74
South Carolina	525	374	151	96,440	15.7	21	83
South Dakota	81	70	11	23,693	4.6	46	25
Tennessee	647	616	31	131,116	2.4	47	13
Texas	3,858	3,093	765	467,087	16.4	18	87
Utah	540	408	132	53,809	24.5	11	131
Vermont	143	108	35	21,598	16.2	20	86
Virginia	2,002	1,402	600	173,550	34.6	3	184
Washington	1,338	1,135	203	162,932	12.5	31	66
West Virginia	166	116	50	41,451	12.1	32	64
Wisconsin	707	563	144	139,646	10.3	37	55
Wyoming	74	72	2	17,909	1.1	48	6
50 States	55,027	41,900	13,127	6,988,975	18.8	—	100
Dist of Columbia	286	205	81	19,469	41.6	—	222
Puerto Rico	N/A	N/A	N/A	N/A	—	—	—

* [(Establishment Births in High-tech NAICS Codes - Establishment Deaths in High-tech NAICS Codes) / Total Establishments] x 10,000

** 100 equals 50-state indicator value



Definition

This metric is based upon a count of the average number of U.S. patents of U.S. origin issued during the three-year period of 1999-2001. The average number of U.S. patents was used to minimize year-to-year variability. Patents were classified according to the state of residence of the first-named inventor. The data were normalized to the number of businesses located within each state in 2000 to facilitate state-to-state comparisons of the intensity of patent activity.

Relevance

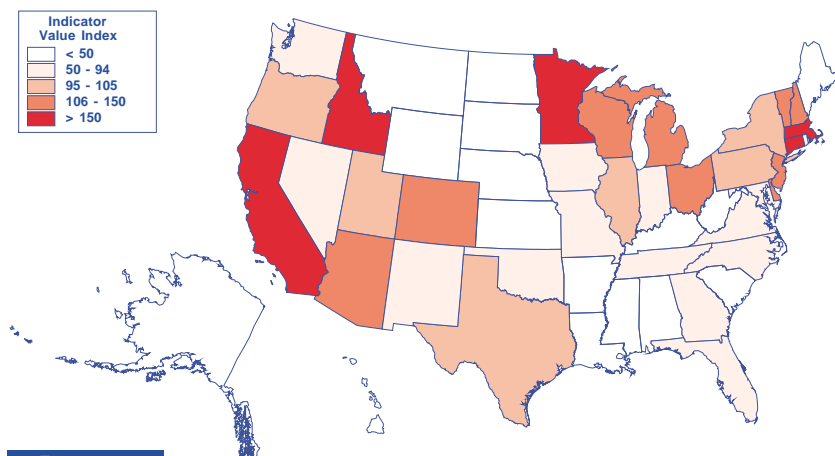
A patent for an invention is the grant of a property right to the inventor that is issued by the Patent and Trademark Office for a period of 20 years from the date on which the application was filed in the U.S. subject to the payment of maintenance fees. The level of patent activity is one measure of the amount of intellectual property being created within a state. Other types of intellectual property include trade secrets and know-how, but these sources are more difficult to measure.

For the 50 states, there were on average 96,490 patents issued per year from 1999 to 2001. This results in a national average of 137 patents per 10,000 business establishments. In the 50 states, the median number of patents issued per 10,000 business establishments was 100.

Data Considerations and Limitations

These data are likely to contain a bias toward states that host the central R&D activities of large corporations with multiple operational sites or major government research centers. If an organization patents prolifically, the vast majority of its patents may be credited to the state where the majority of its researchers reside while the competitive advantage of the intellectual property created by those patents may be practiced and may create value elsewhere.

States with a high concentration of research universities may generate patents that are not reduced to commercial practice if the university does not have an active licensing program.



Source of Data

U.S. Patents Issued:

U.S. Patent and Trademark Office, Information Products Division/TAF Branch, Dozier, G. (2002, February 19). *Patent Counts by Country/State and Year, All Patents, All Types, January 1, 1977 — December 31, 2001*. <http://www.uspto.gov/web/offices/ac/ido/oeip/taf/cst_all.pdf> (2002, May 2).

Establishments:

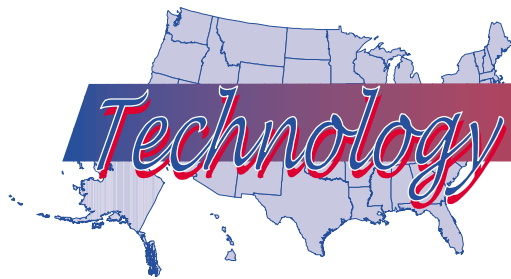
U.S. Census Bureau. *County Business Patterns - United States: 2000*. (2002, May). <<http://www.census.gov/prod/2002pubs/00cbp/cbp00-1.pdf>> (2002, June 12).

Average Annual Number of U.S. Patents Issued per 10,000 Business Establishments: 1999-2001

STATE	Average Annual Patents	2000 Establishments	INDICATOR VALUE *	Rank	Indicator Value Index **
Alabama	440	99,817	44	42	32
Alaska	60	18,501	33	50	24
Arizona	1,694	114,804	148	14	108
Arkansas	232	63,185	37	46	27
California	19,856	799,863	248	2	181
Colorado	2,058	137,528	150	12	109
Connecticut	2,061	92,436	223	3	163
Delaware	432	23,771	182	9	133
Florida	3,106	428,438	72	31	53
Georgia	1,563	200,442	78	29	57
Hawaii	99	29,853	33	49	24
Idaho	1,538	37,429	411	1	300
Illinois	4,365	308,067	142	17	104
Indiana	1,668	146,321	114	24	83
Iowa	769	80,890	95	26	69
Kansas	451	74,939	60	36	44
Kentucky	524	89,921	58	37	43
Louisiana	553	101,016	55	38	40
Maine	151	39,466	38	44	28
Maryland	1,589	128,467	124	23	90
Massachusetts	3,877	176,222	220	4	161
Michigan	4,127	236,912	174	10	127
Minnesota	2,940	139,080	211	5	154
Mississippi	221	59,788	37	45	27
Missouri	1,007	144,755	70	34	51
Montana	149	31,849	47	40	34
Nebraska	260	49,623	52	39	38
Nevada	378	48,178	78	28	57
New Hampshire	681	37,414	182	8	133
New Jersey	4,352	233,559	186	7	136
New Mexico	365	42,782	85	27	62
New York	7,040	492,073	143	16	105
North Carolina	2,140	203,903	105	25	77
North Dakota	94	20,139	47	41	34
Ohio	4,009	270,509	148	13	108
Oklahoma	598	85,094	70	33	51
Oregon	1,451	100,645	144	15	105
Pennsylvania	3,974	294,741	135	20	99
Rhode Island	355	28,534	124	22	91
South Carolina	642	97,146	66	35	48
South Dakota	87	23,783	37	47	27
Tennessee	981	130,876	75	30	55
Texas	6,659	471,509	141	18	103
Utah	781	55,379	141	19	103
Vermont	429	21,564	199	6	145
Virginia	1,239	175,582	71	32	52
Washington	2,115	164,018	129	21	94
West Virginia	162	41,047	39	43	29
Wisconsin	2,109	140,415	150	11	110
Wyoming	61	18,120	34	48	25
50 States	96,490	7,050,393	137	—	100
Dist of Columbia	67	19,655	34	—	25
Puerto Rico	25	N/A	—	—	—

* (Average Annual Patents / 2000 Establishments) x 10,000

** 100 equals 50-state indicator value



Technology Fast 500 Companies

Definition

The 2001 Deloitte & Touche Technology Fast 500 ranks the fastest growing U.S. technology companies over a five-year period. Companies qualify as technology companies if they produce technology, manufacture a technology-related product, are technology intensive, or devote a high percentage of effort to R&D.

Companies can be nominated for consideration by winning one of the 22 regional U.S. and Canadian Fast 50 programs, by submitting a nomination directly, or by public company database research. To be eligible, a company must have annual 1996 revenues of at least \$50,000 and must be headquartered in the U.S. or Canada. It must also have been in business during the entire period extending from 1996-2001. Internet companies account for 15% of the companies, which is a slight drop since 2000, when they represented 17%.

From the Technology Fast 500 list of companies, the number of companies headquartered in each state was counted and normalized to the number of business establishments in that state. Comparisons were then possible between states.

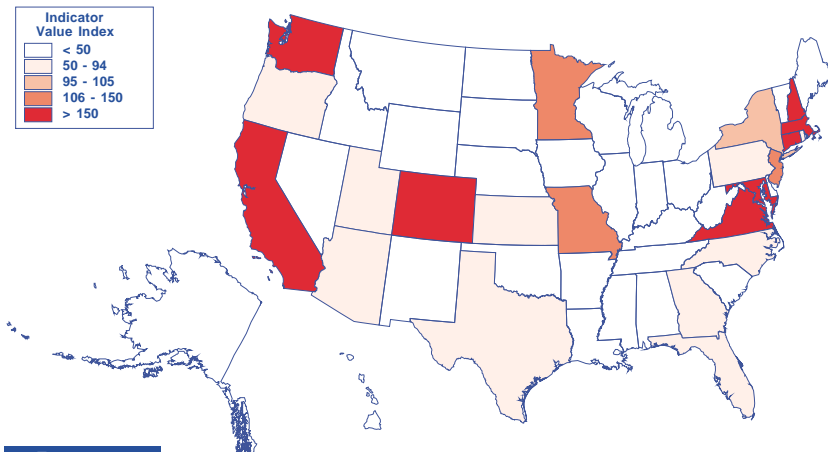
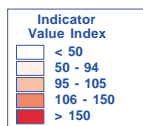
In 2001, there was an average of 0.6 Technology Fast 500 Companies per 10,000 business establishments. The 50-state median number of Technology Fast 500 Companies per 10,000 business establishments was 0.2. Forty-five percent of the companies on the 2001 list were from the Software industry. Other industries with significant numbers of fast-growing technology companies included Internet (15%), Communications (12%), Biotechnology (8%), Computer Peripherals (5%), and Medical, Scientific, and Technical Manufacturing (2%).

Data Considerations and Limitations

Both public and private companies are included on the list, although only the private companies, or another entity working on their behalf, are required to initiate their own nominations. This could produce a bias toward public technology companies in the final list.

Relevance

Technology has become a key ingredient of economic development and the Fast 500 program was created to recognize fast-growing technology companies. This list provides a picture of where the fastest growing technology companies are being created and where the highest concentrations of them exist.



Source of Data

The most recent list of Deloitte & Touche list of Technology Fast 500 companies can be found on the web at http://www.public.deloitte.com/fast500/who_are_fast_500/search/company_search.asp.

Technology Fast 500 Companies:

Deloitte & Touche. *Technology Fast 500*. <http://www.us.deloitte.com/fast500/index.shtml>. (2001, December 10).

Establishments:

U.S. Census Bureau. *County Business Patterns - United States: 2000*. (2002, May). <http://www.census.gov/prod/2002pubs/00cbp/cbp00-1.pdf> (2002, June 12).

Number of Technology Fast 500 Companies per 10,000 Business Establishments: 2001

STATE	2001 Fast 500 Companies	2000 Establishments	INDICATOR VALUE *	Rank	Indicator Value Index **
Alabama	0	99,817	0.0	33	0
Alaska	0	18,501	0.0	33	0
Arizona	4	114,804	0.3	22	54
Arkansas	0	63,185	0.0	33	0
California	132	799,863	1.7	3	257
Colorado	15	137,528	1.1	8	170
Connecticut	11	92,436	1.2	6	185
Delaware	0	23,771	0.0	33	0
Florida	22	428,438	0.5	15	80
Georgia	12	200,442	0.6	13	93
Hawaii	0	29,853	0.0	33	0
Idaho	0	37,429	0.0	33	0
Illinois	7	308,067	0.2	25	35
Indiana	1	146,321	0.1	30	11
Iowa	1	80,890	0.1	28	19
Kansas	3	74,939	0.4	19	62
Kentucky	0	89,921	0.0	33	0
Louisiana	0	101,016	0.0	33	0
Maine	1	39,466	0.3	23	39
Maryland	21	128,467	1.6	4	254
Massachusetts	31	176,222	1.8	1	274
Michigan	1	236,912	0.0	31	7
Minnesota	12	139,080	0.9	10	134
Mississippi	0	59,788	0.0	33	0
Missouri	11	144,755	0.8	11	118
Montana	0	31,849	0.0	33	0
Nebraska	0	49,623	0.0	33	0
Nevada	0	48,178	0.0	33	0
New Hampshire	5	37,414	1.3	5	208
New Jersey	22	233,559	0.9	9	147
New Mexico	1	42,782	0.2	24	36
New York	33	492,073	0.7	12	104
North Carolina	10	203,903	0.5	17	76
North Dakota	0	20,139	0.0	33	0
Ohio	1	270,509	0.0	32	6
Oklahoma	1	85,094	0.1	29	18
Oregon	5	100,645	0.5	16	77
Pennsylvania	11	294,741	0.4	20	58
Rhode Island	1	28,534	0.4	21	55
South Carolina	0	97,146	0.0	33	0
South Dakota	0	23,783	0.0	33	0
Tennessee	2	130,876	0.2	26	24
Texas	23	471,509	0.5	18	76
Utah	3	55,379	0.5	14	84
Vermont	0	21,564	0.0	33	0
Virginia	30	175,582	1.7	2	266
Washington	18	164,018	1.1	7	171
West Virginia	0	41,047	0.0	33	0
Wisconsin	2	140,415	0.1	27	22
Wyoming	0	18,120	0.0	33	0
50 States	453	7,050,393	0.6	—	100
Dist of Columbia	0	19,655	0.0	—	0
Puerto Rico	N/A	N/A	—	—	—

* (2001 Fast 500 Companies / 2000 Establishments) x 10,000

** 100 equals 50-state indicator value



Definition

Inc. publishes an annual list of 500 independent and privately held companies that are ranked on their revenue growth over the last five years. To be included in this list, a company must apply to *Inc.* and must provide tax forms or financial statements prepared by an independent accountant showing its annual revenues during fiscal years 1997-2001. Minimum sales in fiscal 1997 must be at least \$200,000. Ranking is determined solely by net sales growth, and profitability is not a factor. Nonprofits are eligible for this list, but public companies, holding companies, regulated banks, and utilities are not.

From the *Inc.* list of 500 companies, the number of companies in each state was identified. This number was normalized by the number of business establishments in each state to correct for differences in the size of the business base of each state. The resulting metric, the number of *Inc.* 500 companies in 2001 per 10,000 business establishments, allowed comparisons between the states.

Relevance

The *Inc.* 500 list provides a picture of where the fastest growing, privately held companies are being created. Normalizing the count by state to the size of the state's business base provides insight as to where the highest concentrations of fast-growing businesses are located.

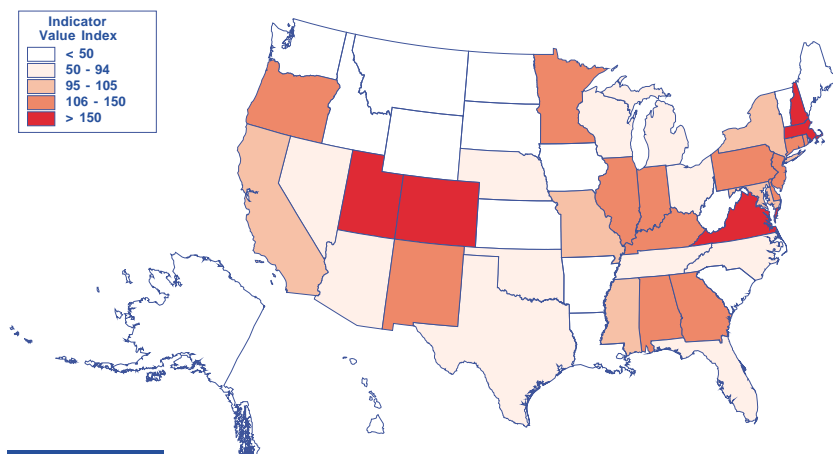
In 2001, there was an average of 0.7 *Inc.* 500 Companies per 10,000 business establishments. The 50-state median number of *Inc.* 500 Companies per 10,000 business

establishments was 0.6. Thirty-eight percent of the companies were in the Computer Software and Services sector followed by 21% in Diversified Services. Other sectors that were well represented included Telecommunications (5%), Computer Hardware (4%), and Materials and Construction (4%). Sixty-nine percent of the companies reported that their initial start-up capital was \$50,000 or less. Most (88%) raised start-up capital by tapping the personal assets of the CEO. Only 3% received venture capital as seed money.

Data Considerations and Limitations

Companies on the *Inc.* 500 list had to apply for the ranking, making this process subject to self-selection rather than being an objective independent assessment. There are a number of factors that may have influenced a company's decision to participate. Companies on the list may have been more aware of and more interested in the ranking than those who were equally qualified but failed to apply. Regional differences in the perceived importance of the list may also exist. Companies in different industries may place different degrees of emphasis on the value of participating. Finally, some private companies may not wish to publicly release their annual sales data while others consider the process a useful step toward an eventual IPO.

It should be noted that corporate registration requirements might affect where a company is registered. The state of registration may not reflect the state(s) where the majority of its business activities take place.



Source of Data

The 2001 listing of *Inc.* 500 companies can be found in textual form in the November 15, 2001 issue of *Inc. Magazine*. It is available electronically at <http://www.inc.com/inc500/>.

2001 *Inc.* 500 Companies:

Inc. Magazine. (2001) *The Inc. 500*. <http://www.inc.com/inc500/> (2001, December 10).

Establishments:

U.S. Census Bureau. *County Business Patterns - United States: 2000*. (2002, May). <http://www.census.gov/prod/2002pubs/00cbp/cbp00-1.pdf> (2002, June 12).

Number of Inc. 500 Companies per 10,000 Business Establishments: 2001

STATE	2001 Inc. 500 Companies	2000 Establishments	INDICATOR VALUE *	Rank	Indicator Value Index **
Alabama	8	99,817	0.8	14	114
Alaska	0	18,501	0.0	44	0
Arizona	5	114,804	0.4	31	62
Arkansas	2	63,185	0.3	35	45
California	59	799,863	0.7	19	105
Colorado	20	137,528	1.5	4	207
Connecticut	9	92,436	1.0	7	138
Delaware	2	23,771	0.8	12	120
Florida	26	428,438	0.6	27	86
Georgia	19	200,442	0.9	8	135
Hawaii	0	29,853	0.0	44	0
Idaho	1	37,429	0.3	37	38
Illinois	24	308,067	0.8	16	111
Indiana	11	146,321	0.8	18	107
Iowa	2	80,890	0.2	39	35
Kansas	1	74,939	0.1	43	19
Kentucky	7	89,921	0.8	17	111
Louisiana	2	101,016	0.2	42	28
Maine	1	39,466	0.3	38	36
Maryland	9	128,467	0.7	20	100
Massachusetts	29	176,222	1.6	2	234
Michigan	14	236,912	0.6	28	84
Minnesota	11	139,080	0.8	15	112
Mississippi	4	59,788	0.7	23	95
Missouri	10	144,755	0.7	21	98
Montana	1	31,849	0.3	36	45
Nebraska	2	49,623	0.4	33	57
Nevada	2	48,178	0.4	32	59
New Hampshire	5	37,414	1.3	5	190
New Jersey	19	233,559	0.8	13	116
New Mexico	4	42,782	0.9	9	133
New York	33	492,073	0.7	22	95
North Carolina	8	203,903	0.4	34	56
North Dakota	0	20,139	0.0	44	0
Ohio	17	270,509	0.6	24	89
Oklahoma	4	85,094	0.5	30	67
Oregon	9	100,645	0.9	10	127
Pennsylvania	25	294,741	0.8	11	121
Rhode Island	3	28,534	1.1	6	149
South Carolina	2	97,146	0.2	41	29
South Dakota	0	23,783	0.0	44	0
Tennessee	8	130,876	0.6	26	87
Texas	29	471,509	0.6	25	87
Utah	11	55,379	2.0	1	282
Vermont	0	21,564	0.0	44	0
Virginia	27	175,582	1.5	3	219
Washington	4	164,018	0.2	40	35
West Virginia	0	41,047	0.0	44	0
Wisconsin	7	140,415	0.5	29	71
Wyoming	0	18,120	0.0	44	0
50 States	496	7,050,393	0.7	—	100
Dist of Columbia	4	19,655	2.0	—	289
Puerto Rico	N/A	N/A	—	—	—

* (2001 Inc. 500 Companies / 2000 Establishments) x 10,000

** 100 equals 50-state indicator value